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The I.L.O.

The International Labour Organisation is an intergovernmental agency, of which 97 countries are members. Representatives of governments, of management and of labour organisations participate in its work. It was established in 1919 and entered into relationship with the United Nations as a specialised agency in 1946.

Its purpose is to promote social justice in all the countries of the world. To this end it collects and disseminates information about labour and social conditions, formulates international standards and supervises their national application. It also engages in operational activities and provides technical assistance in carrying out social and economic development programmes.

The machinery of the Organisation consists of—

The International Labour Conference, which is the supreme body of the Organisation. It constitutes a world forum for labour and social questions. National delegations to the annual meetings comprise four delegates, two representing the government, one representing management, and one representing labour; each delegate speaks and votes independently, so that all points of view find full expression.

The Governing Body, composed of twenty government representatives, ten representatives of management and ten representatives of labour, which is the executive council of the Organisation.

The International Labour Office, which acts as a secretariat, an operational headquarters, a world information centre and a publishing house. It is staffed by experts drawn from many different countries, whose knowledge, experience and advice are available to all nations which are Members of the Organisation. It has branch offices and correspondents in many countries.

The Conference adopts international labour standards which are formulated in special international treaties called *Conventions*, and in *Recommendations*. These are based on careful fact-finding and discussion. As a two-thirds majority of the Conference is required for their adoption they represent the general agreement of informed world opinion. The decisions of the Conference are not automatically binding, but governments must submit the Conference standards to their national legislatures. When the legislature accepts a Convention the government is bound to apply it.

On the operational side the I.L.O. provides governments with expert advice and technical assistance in matters connected with labour and social policy. For this purpose it has established in various parts of the world field offices which serve as centres for assistance to governments in such matters as building up employment services, increasing productivity, the development of training facilities and the administration of social security programmes. The I.L.O. participates in operating the United Nations Expanded Programme of Technical Assistance.

The work of the Organisation also includes the holding of regional conferences, sessions of Industrial Committees to discuss the problems of particular industries on an international basis, and a variety of specialised technical meetings.

All these activities are closely co-ordinated with a view to fulfilment of the purpose for which the International Labour Organisation was created—the promotion of social justice and peace.

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CONTENTS

Page

The I.L.O. and International Technical Co-operation, by Jef RENS 413

The Effect of Public Investment Policy in Some Economically Developed Countries, by S. PLEASE 436

Communications between Management and Workers in the Petroleum Industry 459

Reports and Inquiries

Technical Progress and the Employment and Training of the Young 483

Bibliography

Woman, Wife and Worker in Great Britain 507

Publications of the International Labour Office 509

Publications of the United Nations and Other Intergovernmental Organisations 511

Other Publications 511

The **Statistical Supplement** for this month contains tables of unemployment statistics and consumer price indices.

The International Labour Office is not responsible for opinions expressed in signed articles

The I.L.O. and International Technical Co-operation [1]

by

Jef RENS,

Deputy Director-General of the I.L.O.

Conceived as a bold idea barely ten years ago, world-wide technical co-operation has become a practical reality the importance of which is now universally recognised. As a background to the following description of the contribution that is being made by the I.L.O. to this great enterprise, Mr. Rens first briefly recalls the main features of the whole vast programme of international technical co-operation. Taking up the economic and social aspects of the subject he then analyses the causes of economic underdevelopment and its remedies, in an effort to demonstrate that the essentially social activities of the I.L.O. are an indispensable complement to the economic activities of other agencies. In conclusion he draws the lessons of past experience and lays stress on the great hopes that humanity rightly places on technical co-operation.

IT is not my purpose to review systematically the International Labour Organisation's activities in the field of international technical co-operation. Even if I wished to do so, it would hardly be possible within the confines of a review article to embrace the whole of our experience which, though still young in years, is nevertheless extremely rich and varied. My aim is more limited. It is simply to introduce readers of the *International Labour Review* to the salient features of the programme of international technical co-operation and the I.L.O.'s place in it, and to comment on the new work now being done under this programme in every corner of the world. In the process I shall express some personal opinions

[1] The expression " technical co-operation " has come to replace the former, and less accurate, term " technical assistance ". Mr. David A. Morse, Director-General of the I.L.O., mentioned the reasons for this change in a recent speech (see " The First African Regional Conference of the International Labour Organisation ", in *International Labour Review*, Vol. LXXXIII, No. 3, Mar. 1961, p. 227).

on the value of the results achieved by the I.L.O. through these new activities, the problems and difficulties it has encountered and the vistas opened by international technical co-operation.

History and Present Organisation of Technical Co-operation

In order to put the I.L.O.'s current operational activities into clear perspective, it may be useful to look briefly into the past. If by international technical co-operation is meant the transfer of knowledge, skill and experience from countries that are technically the most highly developed to those that are less developed, then the I.L.O. has dealt in this type of co-operation from its earliest days. True, up to the Second World War, the Organisation concentrated on study and research and on formulating international Conventions and Recommendations designed to propagate sound labour standards throughout the world. But this preoccupation with so-called traditional activities did not prevent it from undertaking genuine technical assistance missions—for example in 1930 in Burma and Greece to advise on unemployment insurance, in 1931 in China to help organise labour inspection, in 1932 in Egypt, in 1934 in Cuba and in 1936 in Venezuela in order to inquire into labour conditions and help organise departments of labour, and in 1937 in Morocco to promote co-operative organisation. During the Second World War many missions of this kind were carried out in Latin America, which at the time was the only area available for the field work of the I.L.O., whose headquarters had been temporarily established in Montreal, Canada [1]; and a number of I.L.O. officials were sent to help the governments of the Latin American countries to draw up social legislation, particularly in the social security field.

Though technical co-operation between peoples has been going on throughout the long history of mankind, it is only about a dozen years ago that it took the form that has turned it into one of the most dynamic forces in international policy. Put forward by President Truman in a Message to Congress on 20 January 1949, of which technical co-operation among nations was the central theme, the idea has since borne abundant fruit. Not only has it led to the large bilateral aid programme of the United States—with a total budget of more than $150 million in 1960-61 alone [2]—

[1] See, in this connection, Jef Rens: "Latin America and the International Labour Organisation: Forty Years of Collaboration 1919-1959", in *International Labour Review*, Vol. LXXX, No. 1, July 1959, pp. 8 ff.

[2] This figure represents the total budget for the International Co-operation Administration (I.C.A.) for the 1960-61 fiscal year.

but a great many other countries in all parts of the world have, in their turn, built up bilateral aid programmes of varying importance. In addition, in August 1949 the United Nations Economic and Social Council drew up a programme of international technical assistance (the Expanded Programme of Technical Assistance—E.P.T.A.), which was endorsed by the General Assembly a few months later. From the beginning the Specialised Agencies were closely associated with the implementation of the programme, and technical co-operation has since become one of their main activities, though remaining on a relatively small scale compared with the bilateral programmes of the Great Powers. In point of fact, it has been estimated that for 1960 the resources of the bilateral aid programmes totalled about $400 million[1] while those of the multilateral programme of the United Nations family amounted to only about $93 million—$34 million for the E.P.T.A. and $59 million for the Special Fund. This Fund, which undertakes longer-term projects than the E.P.T.A., was set up by the United Nations in 1959 to promote pre-investment activities in the developing countries and to supplement work being done under the E.P.T.A.

The I.L.O.'s Contribution to Technical Co-operation

Resources

The I.L.O.'s technical co-operation programme is financed for the most part from the funds made available under the E.P.T.A. and the Special Fund, of which about 11 per cent. are allocated to it. The Organisation's regular budget contains a relatively modest sum for operational work; this year, for instance, it includes a credit of $300,000 for assistance in the labour and social field, $104,000 for workers' education, $15,000 for internships and $60,000 for management development—a total of $479,000 as compared with $351,000 in 1960. In addition, the I.L.O. holds over $430,000 in trust for the governments of various countries; of this sum $260,000 were spent in 1960.

Judging by these figures, the I.L.O.'s share in the total programme of international technical co-operation seems limited. From the point of view of the Organisation, however, this work is one of its chief activities. If the resources made available to the

[1] *La coopération technique dans les pays en voie de développement.* Report drawn up under the auspices of the European Economic Community, Doc. VIII/B/2496/60F (Brussels, May 1960), p. 119. The figure of $400 million relates to bilateral and regional aid and is only approximate, representing an annual average based on the figures of recent years.

I.L.O. by the E.P.T.A. and the Fund are compared with the I.L.O.'s regular budget, which totalled $9,003,909 for 1960, the important place occupied by operational work in the Organisation's programme becomes evident. Even this comparison is far from giving a complete picture of the real position, for a great deal of the time of officials paid under the regular budget is given over to preparing, supervising, and following-up projects financed under the E.P.T.A. or by the Special Fund. Some idea of the scope of operational work can be obtained by comparing expenditure for such work with the total regular budget of the I.L.O. only a dozen years ago. In 1949 the ordinary budget was $5,185,539, representing the sum total of the Organisation's expenditure. Today, the resources provided outside the ordinary budget equal and even exceed this sum. Under the E.P.T.A. alone $4,530,000 are available this year; in addition, some $2,500,000 are provided to cover the year's expenditure on the 13 projects being financed under the Special Fund, which, by December 1960, had already granted the I.L.O. a total of $10,500,000. And since most of these projects are still in their initial stages it may be anticipated that the scale of activity and hence expenditure on them will increase considerably in the years to come.

How the I.L.O. and Its Staff Have Settled Down to the New Tasks

The increasingly heavy load of field work has had a significant influence on the Organisation's programme as a whole, and also on the aims it pursues in its research and standard-setting activities. The accent everywhere is on how to help industrialising countries to canalise their resources for economic and social growth and especially—in accordance with one of the I.L.O.'s main aims—to make the best possible use of their human resources. Research and standard-setting are directed increasingly towards laying the groundwork for an attack on these problems and providing the most effective guidance for operational activities. These activities, for their part, give practical significance to research work and help to focus standard-setting on the real problems of the day.

As soon as operational work was fairly launched efforts were made to integrate it with the Office's more traditional activities. As a result every technical or administrative division now assumes responsibility for technical co-operation projects in its own field in addition to research, study and the preparation of international instruments. Integration of operational with traditional activities has had its effect on the composition and quality of the Office's staff. Field work rapidly brought to the fore officials of a type

rarely encountered before: men of action. The collaboration of these new officials side by side with the traditional researchers of the Office is beneficial for everyone. Even if there has been some division of work between those mainly occupied with research and those primarily responsible for technical co-operation projects, the work of the Office is now distinctly more down to earth than ever before. In fact an entirely new type of official is emerging, one excelling both in research and in technical assistance missions. Basing their action at the same time on sound theoretical training and often considerable practical experience, these officials are constantly adding to their store of knowledge through their stimulating encounters with concrete situations. Technical co-operation being as young as it is, officials of this calibre are still, of course, relatively rare. But I foresee that they will constitute a majority among the international officials of tomorrow.

In addition, the staff of the I.L.O. has expanded greatly to meet the new demands of operational activities—from 521 in 1949 to 1,166 in 1960.[1]

The Geographical Distribution of Operational Activities

In its operational work the I.L.O. must be alive to the needs of the different regions of the world and to the varying capacities of the countries to profit by technical assistance in the labour and social field. Nearly a third of its technical co-operation has been devoted to Asia and another third to Latin America; Africa's share has grown from almost nothing to over 13 per cent. in 1961; and the Middle East has been absorbing a steadily increasingly proportion.[2] This geographical distribution of the I.L.O.'s contribution closely follows the general pattern of international technical co-operation programmes, irrespective of their source of financing. An exception—perhaps temporary—is the Special Fund: so far, approved projects entrusted to the I.L.O. are concentrated very largely in Asia, and projects elsewhere, e.g. in Africa, are still in the planning stages.[3]

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[1] In November 1960, 175 I.L.O. officials were being paid for from the administrative budget of the E.P.T.A. and 14 from that of the Special Fund.

[2] Provisional figures for regional distribution of project expenditure under the E.P.T.A. in 1960 are as follows: Africa, 13.4 per cent.; Asia, 28.7 per cent.; Latin America, 30.1 per cent.; Europe, 8.0 per cent.; Near and Middle East, 18.7 per cent.; and inter-regional, 1.1 per cent.

[3] On 31 December 1960 the geographical distribution of Special Fund projects entrusted to the I.L.O. was as follows: Africa, nil; America, 20 per cent.; Asia and the Far East, 45 per cent.; Europe, 18 per cent.; Middle East, 17 per cent.

Fields of Technical Co-operation

Most of the I.L.O.'s operational work is concentrated—and has been from the beginning—in a relatively few closely related fields—key fields from the standpoint of the development and utilisation of manpower resources in the newly industrialising countries.[1] Manpower organisation, including vocational training, fairly constantly accounts for about half of the total field work. Management development and supervisory training projects have been growing in number and importance, as have projects for the promotion of urban and rural co-operatives and the development of handicrafts and small-scale industries. Work in the social security field regularly absorbs some 5 per cent., and other activities mainly concerned with conditions of work and labour administration nearly a fifth, of total operational programme expenditure under the E.P.T.A.

Training clearly occupies by far the most important place in the I.L.O.'s technical assistance programmes financed under the E.P.T.A. and the Special Fund. But under this heading is included not only the vocational training of manual workers but also the training of supervisors and managerial staff, especially in productivity techniques, as well as the introduction of farmers, handicraftsmen and small-scale producers to co-operative methods and to other techniques calculated to promote small-scale industry.

The technical assistance programme financed through the E.P.T.A. and the Special Fund is aimed primarily at promoting activities which encourage or contribute rather directly to economic development. Whereas well over half of the expenditure for technical co-operation under the I.L.O.'s ordinary budget goes to so-called " social projects "—concerning, in particular, social legislation, social security and labour inspection and administration —these projects account for only about one-quarter of expenditure under the E.P.T.A. and still less of that under the Special Fund. In the final analysis, however, the distinction between " social " and directly economic projects is rather slight and training plays a very important and similar part in both types.

Some may find it surprising that the I.L.O. should devote so much of its technical co-operation work to technical and vocational training. Yet this is the type of assistance most consistently and urgently requested by developing countries and the best

[1] Provisional expenditure figures for 1960 by main fields of activity for operational work under the E.P.T.A. are as follows : manpower organisation, 44.2 per cent. ; productivity and management development, 15.3 per cent. ; co-operation, small-scale industry and handicrafts, 16.2 per cent. ; social security, 5.3 per cent. ; and conditions of work and labour administration, including the Andean Indian Programme (see p. 425 below), 19.0 per cent.

suited to their present needs. It is a striking fact that the need for training is felt in all the developing countries whether in Asia, Latin America, the Near East or Africa, regardless of the degree of their development. Indeed a shortage of well trained technical manpower is one of the surest signs of underdevelopment.

Ever since its foundation the I.L.O. has dealt with vocational and technical training, with apprenticeship and co-operative education through both its research and its standard-setting activities ; in the last few years it has also been spreading productivity techniques and methods for the improvement of small industries and handicrafts. It is only natural, therefore, that the governments of the developing countries should look to the I.L.O. as the international organisation best equipped to help them to train their manpower and supervisory staff. Thanks to its many and varied contacts with employers' and workers' circles, the Organisation has always kept in close touch with the evolution of training methods and techniques, especially those used within undertakings and industries. We have been particularly concerned with rapid and practical training methods capable of meeting the ever-changing needs of industry, whether through accelerated training, apprenticeship, training on the job, the training of foremen and supervisors or the introduction of engineering and managerial staff to modern productivity techniques.

The newly developing countries and those which have already taken the first steps along the path of industrialisation have themselves realised that the lack of well trained skilled workers and technicians constitutes a serious obstacle to their development. In setting up machinery to plan and carry out economic development these countries have discovered how important human resources are for the actual execution of their plans. Hence their increasing interest in the manpower assessment projects which the I.L.O. has evolved and which have proved their practical value in several instances. Conceived in eminently realistic terms, these surveys of human resources not only give a quantitative and qualitative measure of the needs for manpower at each phase of the implementation of development plans but they also provide valuable information on how these needs may be met. Surveys of this kind can constitute a point of departure for permanent employment information programmes ; they often pave the way for working out systems for registering job-seekers ; they frequently lay the foundations for an employment service ; and finally, and above all, they provide the information required by those responsible for vocational guidance and training. Manpower surveys thus form an essential element of the economic planning machinery of the developing countries. It may be expected that they will play an increasingly

important part in the I.L.O.'s programme of technical co-operation.

I shall have occasion to mention the economic returns obtainable from the training of manpower in the developing countries later in this article. Here it may be said that the social impact of training on national development is equally direct and important. Because of its scarcity, well qualified manpower is much sought after in the industrialising countries ; and the difference between the wage of a labourer and a skilled worker is much greater in these countries than in the industrialised ones. With their higher incomes, skilled workers and technicians can raise their living standards appreciably ; and their relatively high earnings act as an incentive which cannot fail to influence the wage structure as a whole and consequently the structure of the society itself. Indirectly, then, the remuneration of all workers is affected in the long run by vocational training programmes.

Economic Underdevelopment: the Ill that Technical Co-operation Aims to Cure

What Underdevelopment Entails

It is the deplorable situation in which underdevelopment has placed vast multitudes of human beings throughout the world that has given rise to international technical co-operation. The economies of the developing countries have many common features : the predominance of the agricultural sector and its numerous shortcomings, the relative weakness of the industrial sector, the lack of investment funds, the overgrowth of the commercial and service sectors, the dependence of these countries on the industrially advanced countries and so forth.

Weakness of economic structure and lack of balance in the productive mechanism result on the social plane in a high mortality rate, poor hygienic conditions, undernourishment, illiteracy, child labour, bad conditions of work for women, and underemployment. In all these respects there is an enormous disparity between living standards in these countries and in the industrially advanced countries. In this connection the figures for national income per head published by the United Nations for the period 1955-57 are revealing[1] : they were $2,075 for the United States, $1,450 for Canada and between $700 and $900 in a number of western Euro-

[1] Figures for national income per head, converted into and expressed in dollars, must be interpreted with care ; they tend, on the whole, to exaggerate the differences between the richer and poorer countries ; they nevertheless give an idea of the vast gap between the wealthier countries and the less fortunate ones.

pean countries, as against under $100 in some 50 countries and territories with a total population of some 838 million. And within the less developed countries the real position of the mass of the people is even worse than these figures suggest because in these countries the internal distribution of income and wealth is most unequal.

> It is, indeed, a regular occurrence endowed almost with the dignity of an economic law that the poorer the country, the greater the difference between poor and rich.[1]

The significant fact is that, in spite of the explosion of social demand throughout the world, this gap is not narrowing, and the statistics published by the United Nations support Mr. Myrdal's contention that we are "moving towards even greater world inequality in living standards." [2]

The Awakening of International Solidarity

All these various facts and trends have made people think. In the developing countries people aspire as never before to education, comfort and wellbeing. Those in the wealthier nations have come to realise that they cannot indefinitely enjoy a privileged standard of living while so many human beings live in poverty. While the former have arrived at the firm conclusion that they have as much right to good living standards as the wealthy nations, the latter realise that their self-interest, as well as their duty, demands that they should help the less privileged peoples. This awakening of world conscience as regards the peoples of the less developed countries has a triple origin.

First, there is the great mass of men—nearly two-thirds of the people of the world—who have become conscious of the gap that separates them from the way of life of the privileged minority. Their attention has been drawn to this disparity mainly by the construction throughout the underdeveloped world of modern cities in which they can see for the first time the ease and comfort of living that are general in western countries. Introduced by the ruling classes, who enjoy a superior social and economic situation, these luxuries have become a pole of attraction for the rest of the people, whose lot is almost without exception harsh if not wretched. From such comparisons, from such attractions, emanates a popular will to put an end to inequalities hitherto accepted by the masses with resignation. The people are now demanding a standard of living which, until recently, it considered quite unattainable.

[1] Gunnar MYRDAL: *An International Economy, Problems and Prospects* (New York, Harper & Brothers, 1956), p. 133.

[2] Ibid., p. 1.

In the industrialised countries, more and more people are finding common cause with the disinherited of the underdeveloped world. The social conscience that evolved in the democratic climate of the industrial nations, being limited at first to each country's own working class, has now spread across class and national frontiers to embrace the peoples of the less developed countries. It is a clear consciousness of the direction in which both their own interest and their social duty lie that has brought the privileged nations of the world to recognise the bond of solidarity that links them to the less fortunate peoples.

The governments of the advanced countries realise that the high standard of living attained by their peoples cannot be maintained if the gap between the rich and the poor nations is allowed to widen continually.

Although the officials of the I.L.O., accustomed as they are to investigating the problems, the legislation and the social statistics of different countries and to making comparative studies of them, have long been aware of the situation prevailing in the underdeveloped countries, the frequent technical assistance missions they have more recently been called upon to undertake have given new meaning to their work. The experience of coming face to face with small children in Asia and Africa with their bellies swollen from starvation, of encountering agricultural workers in some parts of Latin America who earn as little as the equivalent of 5 United States cents a day, of actually seeing the abject hovels that surround the big towns in most of the developing countries—all this has enabled our staff to analyse the documents, figures and statistics reporting these realities with greater understanding and in more vivid and human terms. At the same time our experts and the members of our staff feel that they are making a direct and substantial contribution to the transformation and improvement of the hard realities of the underdeveloped world. Their work often gives them opportunities for creative endeavour—opportunities that have become all too rare in the complex and rigid societies of the industrialised countries with their extreme division of labour. All this helps to explain the devotion and enthusiasm with which so many of the members of the Office carry out their technical assistance missions.

The Remedy for Underdevelopment: Investment and Pre-investment Measures

How is an end to be put to underdevelopment? By speeding the economic growth of the underdeveloped countries, which has hitherto been much too slow. No one has put the problem better

than Paul G. Hoffmann, Director of the Special Fund, when he said—

> The statistical income per person in the 100 countries and territories in the year 1950 averaged approximately $90. It probably reached slightly over $100 per person in 1959. Gross income grew at the rate of 3 per cent. a year, but because there were 200,000,000 more mouths to feed in these countries in 1959 than there were in 1950, the net increase in income per person was only about 1 per cent., that is about $1 a year. This is too slow—dangerously so.[1]

How low the rate of economic growth in the underdeveloped countries really is can be seen by comparing it with that of the industrialised countries, which, according to W. Arthur Lewis—

> . . . do indeed tend to invest between 10 per cent. and 15 per cent. of their national incomes, net of depreciation, and their incomes do tend to grow by between 3 per cent. and 4 per cent. per annum.[2]

Lewis also defines rapid industrialisation as " a persisting increase in manufacturing output of 6 per cent. per annum or more ".[3] This rate has in fact been exceeded by several countries, including the United States, Canada, Japan, the U.S.S.R., the Federal Republic of Germany, France and Sweden, all of which maintain an annual investment rate of 10 to 15 per cent. of their national incomes and a rate of growth of manufacturing output of 5 to 10 per cent.

Most of the underdeveloped countries, in contrast, invest a scant 5 per cent. of their national incomes.[4] In economic terms, then, the problem consists in raising the investments of these countries from 5 per cent. to at least 10 per cent. of their national incomes.[5] For the immediate future Paul G. Hoffmann proposes that the nations of the world should aim to help the underdeveloped countries to double the yearly rate of increase of national income per head, so that it will rise in ten years from $100 to $125. The experts envisage several measures to attain this aim, such as an increase and improvement of institutions promoting thrift (savings banks), reorganisation of the economic infrastructure (public

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[1] Paul G. HOFFMANN : *One Hundred Countries, One and One Quarter Billion People. How to Speed Their Economic Growth and Ours in the 1960's* (Washington, Albert D. and Mary Lasker Foundation, 1960), p. 10.

[2] W. Arthur LEWIS : *The Theory of Economic Growth* (London, George Allen & Unwin, 1955), p. 202.

[3] Idem : *Aspects of Industrialisation.* Three lectures delivered at the Société Fouad Ier d'Economie politique, de Statistique et de Législation, Cairo, 27-30 March and 1 April 1953, pp. 14-15.

[4] Andrew SHONFIELD : *The Attack on World Poverty* (New York, Randon House, 1960), p. 61.

[5] W. W. ROSTOW : *The Stages of Economic Growth* (Cambridge, University Press, 1960), pp. 39-46 ; and *Aspects of Industrialisation*, op. cit., p. 15.

services, gas, electricity, roads, ports, etc.), the attraction of foreign capital without political strings against guaranteed repayment and interest. These are economic and political measures which I have no intention of examining here. There are, however, other possible measures of particular interest to the I.L.O. I am thinking above all of the pre-investment measures spoken of by Paul G. Hoffmann as follows:

> It is urgent to speed and expand programmes of technical assistance, especially work such as that of the United Nations Special Fund in surveying natural resources and training people in the skills they must have to make effective use of their rivers, forests, fields and mineral wealth. The reason for underdevelopment is underutilisation of physical and human resources. Our aim is to raise production and productivity, particularly in the low-income countries. This requires investment. But investment, public as well as private, will not venture into the dark. On the other hand, it is attracted by possibilities for its fruitful use.
>
> Each day at the United Nations brings new evidence of how little is really known about the physical resources of the less developed countries and of the shameful neglect of their human resources. Investment can only flow at an adequate rate if pre-investment assistance brings to light investment opportunities and supplies the skilled manpower required for the investment to be feasible or effective.[1]

This clearly brings out the vital role played by the I.L.O.'s training programme in the pre-investment policy of the Special Fund. Similarly, W. Arthur Lewis has underlined how important it is for developing countries to train not only skilled manpower [2] but also supervisory [3] and managerial staff.[4] Andrew Shonfield has also made a most convincing case for the value of well-trained manpower in capital formation, an indispensable element in economic development.[5] And W. W. Rostow was making the same point when he said—

> Men must come to be valued in the society not for their connection with clan or class, or even their guild, but for their individual ability to perform certain specific, increasingly specialised functions.[6]

All these somewhat theoretical considerations throw clearly into relief the practical value for national economic development of projects undertaken by the I.L.O. to assist the Governments of Egypt and Malaya to set up training and productivity centres, to strengthen the vocational training schools of Brazil's national industrial apprenticeship service (SENAI), to launch national

[1] HOFFMANN, op. cit., p. 11.
[2] *Aspects of Industrialisation*, op. cit., pp. 31-35.
[3] Ibid., p. 32.
[4] Ibid., pp. 26-27.
[5] SHONFIELD, op. cit., pp. 122-127 and 233.
[6] ROSTOW, op. cit., p. 19.

training facilities modelled on those of SENAI in Venezuela, Colombia and Peru, to establish national productivity centres in Israel and Argentina, and to develop instructor training centres in India and Yugoslavia.

Sustained training effort in the handicraft and small industries sectors can also produce good results from the standpoint of economic development. Small and medium-sized producers in these sectors, provided they are given a certain minimum of guidance and training, can head undertakings which require little capital investment and can compete profitably with other industries. I.L.O. activities in Ceylon, though so far carried on with too limited resources, show what good results can be attained. Many of the less developed countries continue to import, at high prices and with scarce foreign exchange, products that they could easily make themselves by using part of their underemployed or badly employed manpower. Guided by sound technical and economic advice based on systematic market analyses, and with the help of easy credit facilities, a number of small and medium-sized entrepreneurs could certainly find employment remunerative for them and useful to their countries. Small undertakings can thrive in various fields such as the maintenance and repair of motor vehicles, bicycles, radios, refrigerators, sewing machines, watches and clocks ; the manufacture of furniture, toys, plastic goods, bicycles, hand tools, starch and soap ; jewellery-making ; brick-making ; tile-making ; quarrying ; ceramics ; pottery ; leather work ; fish processing ; and canning of vegetables, fruits, meat, etc.

Among pre-investment projects mention must be made of those aimed at the integration of indigenous and nomadic populations into the economic and social life of their countries, projects exemplified by the Andean Indian Programme, undertaken by the United Nations and four Specialised Agencies.[1] This is a programme which aims at raising the living standards and working conditions of backward peoples, isolated from the national economy, by organising for their benefit all the education and training facilities needed to achieve this goal : systematic building of primary and secondary schools, and of schools for the training of teachers for rural areas ; the organisation of training courses for rural leaders, nursing auxiliaries, social assistants, midwives, agricultural advisers, veterinary assistants ; the setting up of training workshops for skilled and semi-skilled workers in industry and village handicraft occupations (such as blacksmithery, carpentry, dressmaking). The generalisation of primary education coupled with a parallel

[1] In this connection see " Latin America and the International Labour Organisation : Forty Years of Collaboration 1919-1959 ", op. cit., pp. 17-18.

development of training facilities in all the fields likely to be of use in improving the life of these peoples, with the ultimate aim of assisting their integration with the more advanced sectors of the population, represents, in my view, a development scheme capable of producing excellents results in many of the less developed countries, particularly in Africa and Asia. The results already achieved under the Andean Programme, even with the extremely limited resources available for its implementation, are a clear demonstration of the possibilities offered by this type of project. Requests already received by the I.L.O. from countries in other regions of the world seem to confirm that this approach could be used more widely.

A good many of the special experiments made under the Andean Programme appear to be applicable in almost all the developing countries where there are problems involving the transformation and readaptation of rural areas to the new exigencies of industrialisation. Rural schools, training workshops and village apprenticeship workshops make it possible to develop from among the rural population the skilled and semi-skilled workers needed by expanding industries and at the same time to train the craftsmen and women who can help to raise standards of life and work in the villages themselves.

The Organisation of Technical Co-operation

It is hardly surprising that a programme of the dimensions already attained by international technical co-operation, and one which in many respects is something of an innovation, should have presented the international organisations with many new problems at the same time as it has considerably enriched their experience.

I shall do no more than mention here a few of the problems that the I.L.O. has had to face, and I shall discuss in the final section some of the lessons the Organisation has learnt in this new experiment.

The mobilisation of the human resources needed for carrying out the technical co-operation programme is without any doubt one of the most engrossing problems. In the last ten years the I.L.O. alone has used about 1,300 experts on its technical assistance projects.[1] We have had to find people who not merely were technically competent and had wide practical experience but also possessed the necessary linguistic, psychological and human qualifications. Before being able to work in the new environment which the

[1] During 1960 alone there were 350 I.L.O. experts on assignment coming from 56 different countries.

country of assignment represents for him, the expert has to adapt himself to it and learn to live in harmony with the local people. He may often have to adjust the methods of training and the approaches used in his own country to the special conditions of a newly developing one. These efforts of adaptation have already given rise to entirely original forms of vocational training, employment organisation and co-operative organisation.

The Recruitment of Experts

If, as may be anticipated, the volume of our operational work continues to expand, it will become necessary to make a thorough study of present methods of recruiting experts. This is a task which falls very largely to the national bodies which supply most of the technical co-operation experts. The international organisations recruit the bulk of their experts either through the Ministries which serve as their channel of contact with the governments, or through national recruitment machinery specially set up by the governments for the purpose. These official agencies naturally tend to look for experts primarily in the public service sector. Some time ago I reached the conclusion that this source of recruitment, though indispensable and extremely valuable, is not enough, and that a special effort must be made to widen the area of recruitment of our experts by exploring the industrial sector, professional technical circles and the management of co-operative institutions. And if this effort is to give tangible results, the governments will have to back it up with a solemn and formal appeal to these various bodies urging them to recognise and assume their full responsibilities.

Often, too, recruitment runs into language difficulties. It frequently happens that a technically qualified man or woman lacks the linguistic knowledge necessary for undertaking given missions in the less developed countries. Here again the governments concerned could help by organising special intensive language courses for experts wishing to undertake missions abroad.

Teams of Experts

Another aspect of the use of international experts is perhaps worth mentioning. Each time a large-scale project involves the employment of a whole team of experts, fresh difficulties of considerable importance arise. The composition of a team of experts coming from different countries and trained in their fields of specialisation by different methods and in different milieus is a very delicate matter. Out of these highly disparate elements a homogeneous team has to be formed capable of collaborating harmoniously and of imparting its skills to the nationals of the developing

countries. Our experience shows, however, that differences in national origin, methods of training and background, added to the personal characteristics of the members of a team, often create friction and tension and, unless due caution is exercised, risk frustrating the whole project. Perhaps because we have not always given this aspect of the problem of recruitment the necessary attention, we have sometimes had to face conflicts that have required much tact and patience to resolve.

Training Fellowships

The serious difficulties entailed by the recruitment and employment of experts for international technical co-operation are matched by those raised by the selection and placement of fellows. If a fellowship is to make a real contribution to a particular aspect of national development, the fellow must be selected carefully from a technical standpoint and with no suspicion of patronage. Merit and intelligence must be the dominant criteria ; and it must also be made as certain as materially possible that the fellow, on returning to his country, will actually be utilised in the specialised capacity for which the fellowship was awarded. This granted, there seems to me to be a real case for a serious review of the whole policy of fellowships. Up to the present, except in the case of worker trainees, the I.L.O. has granted fellowships primarily to nationals called upon to continue the work begun by international experts —the so-called " counterpart personnel " working alongside the experts from the moment of their arrival. Usually I.L.O. experts are asked to give special attention to the training of these nationals, who will take over from them on their departure or will carry out elsewhere in the country what they have demonstrated in one or two places. Very often fellowships are granted on the advice of the experts. The period of study abroad is usually fairly short—two, three or six months—and its purpose is to improve the fellow's training or even to teach him a specific type of knowledge or skill. Now, however, we are beginning to wonder whether fellowships should not be granted to cover a complete apprenticeship. In many countries—especially in Africa—the huge demand for trained supervisors and managerial staff and, in general, for university-trained graduates of all kinds, can no longer be met through the work of international experts or by means of short training fellowships. The time has come to consider longer fellowships, covering the entire duration of higher study for the key officials and managerial personnel so badly needed by every developing country. Fellowships of this sort would provide a means of acquiring basic knowledge and skills and no longer merely for perfecting them.

Intangible Factors

To revert for a moment to the question of experts, although their essential task is undoubtedly to transmit to their partners in the developing countries their own knowledge and technical experience, yet they perform another function that is often underestimated in my view. This has to do with what I shall call " intangible values ", those values which form the substructure of every industrial society without which science and technology cannot thrive. Take, for example, the appreciation of the " time " element ; industrialisation not only demands regular attendance on the part of those associated with it but also requires each component operation to be exactly timed, so that those who carry out these operations must have a full appreciation of the importance of the time element in the production process. Then there is the sense of order, indispensable to the systematic organisation of any industrial undertaking : in the arrangement of the workshops, in the lay-out of the machines, in book-keeping and in the organisation of stores for raw materials and tools. There is further the sense of respect for promises and agreements which is the very foundation of all commercial and financial organisation. And still further the application of standards of hygiene and cleanliness desirable in any undertaking and indispensable in textile and chemical works and in the manufacture of precision instruments, the optical industry, etc. Last but not least is the problem of getting rid of the dislike for manual work that is rife in so many of the developing countries : for, so long as manual work is not held in higher esteem, vocational and technical training will be hampered and industrial development adversely affected.

The Lessons of Experience

This brings me to an over-all assessment of our technical co-operation work. From time to time this has been evaluated either in its entirety [1] or piecemeal.[2] The purpose of evaluation is, of course, to find out whether any particular project has been a success or a failure.

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[1] See the following reports to the Governing Body of the I.L.O. : document G.B.143/T.A./D.1/1 : *Progress Report on the Operational Programme, 1958* ; document G.B.147/O.P./D.2/2 : *The Operational Programme of the I.L.O. in 1959 and the First Half of 1960* ; see also I.L.O. : *Technical Assistance*, International Labour Conference, 37th Session, Geneva, 1954 (Geneva, 1954).

[2] See document G.B.128/T.A./D.1 : *Evaluation and Assessment of the I.L.O. Technical Assistance Programme : Ceylon, Haiti, Israel, Yugoslavia* ; and document G.B.130/T.A./D.2/2 : *Evaluation of the I.L.O. Technical Assistance Programme : Burma, Guatemala, Iran, Libya.*

The Requisites for Success

As one of our officials whose work kept him constantly in touch with the field so aptly remarked, even successful projects contain certain elements of failure, just as every project that is considered to have failed has left seeds of success for the future. On the whole, there is no doubt that up to now the I.L.O.'s technical co-operation activities have had an impact—almost invariably a favourable one—on economic and social conditions in a great many of the countries in the "disinherited" regions of the world. Our experience shows, furthermore, that the most successful projects, from the standpoint of influence and practical results, are those which are conceived and implemented on a fairly large scale and which are spread over several years. The success of a project depends not only on the competence of its experts and fellows but also on its duration, size and scope. Teaching a technique is not a one-time operation: it requires a certain minimum number of repetitions, failing which nothing will have been learnt. To the extent to which the nature of the project permits, we aim to leave behind us not only national staff capable of practising the new techniques but also permanent institutions where these techniques can be taught. As the E.P.T.A. has developed, we have discovered that projects that are closely co-ordinated with national economic and social development plans have the best chance of success. That is why I want to emphasise the importance of co-ordination and planning machinery in the whole process of the development of industrialising countries. Personally, I consider that in these countries the United Nations has no more important task, outside the purely political field, than to devote its energies not only to the training of key staff for national administration—as it already does through the programme for operational, executive and administrative personnel (O.P.E.X.)—but also, and above all, to the setting up of well conceived and well staffed co-ordination and planning machinery. The economic needs of the developing countries are so great that every reasonable step must be taken to avoid waste and create the best possible conditions for the mobilisation of domestic resources and the attraction of foreign aid in the form of experts and capital.

The Supervision of Experts

It is often observed, and sometimes critically observed, that the I.L.O. exercises strict supervision over its experts in the field and directs their work very closely. While these remarks may, as I myself believe, tend to exaggerate the true picture, it is true that we have established very close contacts between our technical staff

in Geneva and our experts in the field. The main reason for this is because we want our experts, in carrying out their missions under our responsibility, to have the full benefit of the considerable technical and social experience accumulated by our staff over several decades. At the same time we are concerned that the experts, in carrying out our technical assistance projects, should conform as closely as possible to the relevant standards laid down in our international Conventions and Recommendations. But do we in consequence overlook the particular national and regional characteristics of the areas in which our experts are at work? Not at all. Fully appreciative of these factors, the I.L.O. has made a special effort to keep in close touch with national and regional trends and has gradually built up an impressive network consisting of 12 national Branch Offices and 34 national Correspondents backed up more recently by five regional Field Offices.[1] All the officials serving in these offices in the less developed countries and regions act as intermediaries between the governments of these countries, the experts serving there and the technical services of the I.L.O. in Geneva. The regional Field Offices form a practical extension of the technical divisions of the I.L.O., noting and reporting the progress of missions, backing up the experts and helping them to overcome problems, and sometimes themselves undertaking the whole or a part of a technical assistance project. They are working in ever closer co-operation with the regional economic commissions of the United Nations and we are planning to locate them in the same towns as these commissions wherever possible. In these ways our technical co-operation programme is a blend of the contributions of the Headquarters in Geneva, which is necessarily preoccupied with general and universal matters, of the Field Offices, which keep a close watch on regional needs and act accordingly, and of the national Branch Offices and Correspondents, who are especially well placed to record and report on conditions in their countries.

Interdependence of Economic and Social Matters

We have sometimes been asked whether we have not taken a wrong turning by failing to limit our operational work exclusively to the " social " field and by extending it, for example through our training activities, into the " economic " field.

The reasons for which we have attached such importance to technical and vocational training projects in the initial stages of

[1] A second Field Office for Africa is to be set up in the near future. The cover of the *Review* provides a complete list of the location and addresses of the Branch Offices, Correspondents and Field Offices which gives an idea of the wide international coverage of the field structure.

the technical co-operation programme have already been discussed.[1] Technical and vocational training is, in fact, an outstanding example of the interdependence of economic and social action. By helping to train the supervisory staff and skilled workers that the developing countries will need to attain their goals we are sure to contribute directly to the improvement of the living standards of their peoples.

But, this being said, I consider that we shall, in fact, have to devote more and more attention to purely "social" projects. When a country has little or no industry the first thing to do is to create conditions that will promote industrialisation : raw materials that can profitably be exploited have to be explored ; plans have to be made for the establishment of industries and undertakings, for attracting capital, for training the leaders and the manpower needed for the new industries. As soon as these are fairly established, then purely social problems come to the fore, such as the recruitment of manpower, which implies the establishment of employment offices, or the construction of low-cost housing so that the workers may live near their workplaces, or the development within the undertakings of appropriate safety and health conditions, themselves an integral part of the production process. Then, as industrialisation proceeds and creates a more numerous class of wage earners, the question of social security arises in direct response to the needs of this new class, whose characteristic dependence on the undertakings and on economic vicissitudes dictates the need for social security protection.

While I am speaking of the importance of purely social projects of technical co-operation it may be worth stressing the fundamental difference between the circumstances in which industrialisation is proceeding today in the developing countries and those prevailing in the West nearly two centuries ago and in the U.S.S.R. between the 1917 Revolution and the Second World War.

When industrialisation got under way in the United Kingdom at the end of the eighteenth century, for 75 years investment was made at the expense of the workers. In the initial stages industry in the countries of western Europe was built on the misery of the workers, whose deplorable conditions of life and work were at last the subject of official inquiries that marked the genesis of social legislation. In the U.S.S.R. for nearly 25 years all efforts were concentrated on the edification of a solid structure of basic industries, consumption being in the meantime strictly planned and maintained at a relatively low level. While there were a number of differences in the conditions in which industrialisation was initiated

[1] See pp. 418-419 above.

in the two cases, a common feature was that productive effort was directed first towards investment and only after a time towards consumption.

Today, for reasons that have already been mentioned [1], the peoples of the developing nations, though they all fervently desire the economic growth of their countries, are all demanding a rapid simultaneous improvement in their standard of living. The political and psychological climate of the world of today precludes industrialisation in the developing countries from following the classical course outlined above. The workers in these countries have patterned their claims on those of their fellows in the industrialised countries ; they will not patiently shelve these claims until the industrial structure has been soundly built up ; they expect social progress to keep pace with economic development. As industrialisation proceeds in the developing countries, therefore, and as their agricultural sector becomes more highly mechanised, who can doubt that truly social projects of technical co-operation will multiply and increase in importance ?

Co-ordination of Efforts

One final aspect of international technical co-operation—and by no means the least important—remains to be discussed : the problem of co-ordination of effort at all levels. As I said at the beginning of this article, international technical co-operation is not a planned, homogeneous programme. On the contrary, close examination of its components reveals a multiplicity of bilateral programmes—American, Russian, French, English, Netherlands, Belgian, Czechoslovak, German, Israeli, Chinese, etc.—alongside limited multilateral programmes functioning, for example, through the Colombo Plan, the European Economic Community, the French Community and the Organisation of American States. In addition, there are the two multilateral programmes of the United Nations—the E.P.T.A. and the Special Fund (executed by 12 international organisations [2])—as well as a number of programmes not financed out of public funds but under the authority of private

[1] See p. 421 above.

[2] International Labour Organisation (I.L.O.) ; Food and Agriculture Organisation (F.A.O.) ; United Nations Educational, Scientific and Cultural Organisation (U.N.E.S.C.O.) ; World Health Organisation (W.H.O.) ; International Bank for Reconstruction and Development (I.B.R.D.) ; International Finance Corporation (I.F.C.) ; International Monetary Fund (I.M.F.) ; International Civil Aviation Organisation (I.C.A.O.) ; Universal Postal Union (U.P.U.) ; International Telecommunication Union (I.T.U.) ; World Meteorological Organisation (W.M.O.) ; Inter-Governmental Maritime Consultative Organisation (I.M.C.O.). To these 12 organisations must be added the International Atomic Energy Agency (I.A.E.A.).

foundations [1], each of which also runs a programme financed from its own ordinary budget.

Up to now little has been done to develop co-ordination between the various pieces which make up this extraordinary mosaic. The best co-ordinated are still, I consider, the parts under the responsibility of the international organisations, which have produced excellent results through the Administrative Committee on Co-ordination, the Technical Assistance Board, the Technical Assistance Committee, the Economic and Social Council, the Consultative Committee and the Governing Board of the Special Fund. On the whole, though, the various parts of this tremendous bilateral and multilateral technical co-operation effort have few direct practical contacts and there are no systematic channels for constant co-ordination of the work each of them is doing. This inevitably results in losses that it would be unforgivable not to put a stop to as soon and as completely as possible. In order that all the contributions to international technical co-operation—both in men and in money—may serve the most useful purpose, it is essential not only for the developing countries to plan their own progress rationally, but also for the contributing countries and organisations to plan and co-ordinate their activities and efforts, both among themselves and in direct relation to those of the countries seeking their help. A first step in this direction was taken in Washington in February 1961, when a meeting convened under the auspices of the Organisation for Economic Co-operation and Development (O.E.C.D.), and grouping representatives from contributing governments and the international organisations of the United Nations family, discussed certain aspects of the co-ordination of international multilateral aid with bilateral programmes.

Technical Co-operation : A Pledge of Peace

At the beginning of this article I noted the new element which international technical co-operation has introduced into the relations between peoples in the world today. But if this new programme of co-operation is to bear full fruit, it has to become a common effort shared by all countries of the world irrespective of

[1] Among these mention may be made of the following : Ford Foundation ; Rockefeller Foundation ; Near East Foundation ; World Veterans Federation ; American Friends Service Committee ; International Co-operative Alliance ; World ORT Union ; Carl Duisberg Gesellschaft ; Commission générale d'organisation scientifique ; Friends International Centre ; Co-operative for American Remittances Everywhere (C.A.R.E.) ; Recherche et action internationales pour la promotion humaine (I.R.A.M.) ; Community Development Projects Ltd. ; Bischoflicher Werk gegen Hunger und Krankheit in der Welt (Miserior).

political or ideological differences. And if the endeavour is not to conflict with its very essence as reflected in its title, it has to be not an instrument of discord, rivalry or cold war, but a vehicle of understanding, co-operation and peace.

If the governments of all the developed countries can only agree to work together wholeheartedly and without mental reservation in a common endeavour to help the developing countries, great progress will have been made towards peace. A joint venture of this kind, embracing all the developed countries, would also kindle the enthusiasm of the younger generations, who are anxious not simply to carve out a place for themselves in life but also to give the best of themselves in a noble cause.

The Effect of Public Investment Policy in Some Economically Developed Countries

by

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In the following article Mr. Please presents figures for public investment in ten industrial countries and compares them with general economic indicators in an attempt to determine to what extent public investment may have had the effect of stabilising economic fluctuations in these countries. Although no consistent trend emerges from this study, the author shows that public investment does in fact vary widely from year to year and suggests that greater use might well be made of it to counteract short-term inflationary or deflationary tendencies, as has been done in some of the cases considered.

YESTERDAY's heresies, it is said, are today's orthodoxies. This is certainly true of the belief that expenditure undertaken by the government on capital projects such as roads, land drainage, production of railway rolling stock and so forth should be used to provide employment for the unemployed. The I.L.O. was always one of the heretics. The First Session of the International Labour Conference recommended in 1919 that each member State of the I.L.O. should " co-ordinate the execution of all work undertaken under public authority, with a view to reserving such work as far as practicable for periods of unemployment and for districts most affected by it ".[1] The principal I.L.O. instrument dealing with the question is the Public Works (National Planning) Recommendation, 1937.[2]

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[1] The Unemployment Recommendation, 1919.

[2] This, *inter alia*, contained the following provisions :

" 1. (1) Appropriate measures should be adopted for the purpose of achieving a suitable timing of all works undertaken or financed by public authorities.

(2) This timing should involve an increase in the volume of such works in periods of depression and for this purpose it is desirable to provide for

In the 1930s, and again in 1946 after a decade of experience and of important advances in economic thought, the I.L.O. published reports [1] presenting the case for a public works policy and describing the efforts of governments to apply such a policy.

Many governments, notably in the industrially advanced countries, have stated explicitly their intention to pursue what is now called a public investment policy in the interests of employment policy. This intention is brought out clearly for instance in a United Nations report published in 1949.[2] This report surveyed the measures proposed by member countries to implement their pledges under the United Nations Charter (articles 55 and 56) to promote " higher standards of living, full employment, and conditions of economic and social progress and development " and to " take joint and separate action for the achievement of [these] purposes ". In summarising these measures the report emphasised that " the most frequently mentioned is public investment financed by government borrowing ". Certainly the intention to promote full employment by this means has been present. But to what extent, if any, have governments succeeded in bringing this intention into effect?

Measuring the Effects of Investment Policy

In order to give a precise answer to this question it is necessary to indicate the way in which the rationale underlying public investment policy has evolved since the 1930s. The current notion of a public investment policy is broader and more refined than the old concept of public works policy. The latter was formulated as a measure to counteract the severe unemployment associated with the slump phase of the trade cycle during the years between the two world wars. It was an economic measure in conception to the extent that it was argued that useful works could be undertaken by workers who would otherwise be producing nothing and also to

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the preparation in advance, during periods of prosperity, of works capable of being held in reserve or exceeding ordinary requirements and which should be ready for execution as soon as the need is felt.

(3) Special attention should be paid to public works which stimulate heavy industries or public works which create a more direct demand for consumers' goods, as changing economic conditions may require.

2. The policy of timing public works should apply to all such works (including works in colonies) undertaken by central authorities, regional or local authorities, public utility undertakings, or any body or individual in receipt of subsidies or loans from a public authority."

[1] I.L.O. : *Public Works Policy*, Studies and Reports, Series C (Employment and Unemployment), No. 19 (Geneva, 1935) ; and idem : *Public Investment and Full Employment*, Studies and Reports, New Series, No. 3 (Montreal, 1946).

[2] *Maintenance of Full Employment* (New York, 1949).

the extent that it was believed public works would have, as secondary effects, the stimulation of further expenditure, investment and employment. It was argued that although the government initially created only a limited volume of additional employment, the extra income thereby earned would be spent by its recipients and this expenditure would create further employment and income. Business men, recognising the more buoyant market conditions, would themselves demand more equipment, factory space and other capital goods with which to satisfy this more buoyant market, and this extra expenditure in its turn would have comparable stimulating effects. Thus the economic life of the country would be " pump primed " by the initial government public works expenditure. In part, however, the old public works argument was social in conception, being aimed at keeping men occupied and paid, and off the street corners.

The new conception of a contra-cyclical public investment policy, like all employment policy today, still has these economic and social objectives. However, it is more comprehensive and ambitious in its scope. The aim is, without necessarily altering the long-term level of public investment expenditure, to time it in such a way that it is high when the economy is in a deflationary condition and low when the economy is experiencing inflation. Thus, when there is an inadequate level either of expenditure by private firms on capital goods or of consumption expenditure by consumers or the government, there would be an increase in capital expenditure in the public sector, in order to boost incomes and employment ; whilst in an inflationary situation with other forms of expenditure unduly high, the level of public investment would be reduced. By varying public investment in this contra-cyclical manner the government could help to stabilise the level of employment in the economy.

Two separate approaches can be taken in investigating the extent to which such a contra-cyclical public investment policy has been carried into effect. One is to discover the extent to which at different periods public investment has been consciously and deliberately adopted by governments as a weapon of policy to counteract an inflationary or recessionary situation. This approach is by far the best, for it examines the problem as a live issue. The United Nations Economic Commission for Europe has in part approached the more general problem of the contribution of the public sector to stabilisation policy in this manner.[1]

The second approach is also of great interest, at least as a stepping stone to closer study of the question. This is to look at

[1] See *Economic Survey of Europe in 1959* (Geneva, 1960), Part 3, passim.

the problem merely in what economists call " ex-post " statistical terms. Leaving aside the question of government policy or intention, we merely ask whether the national accounts figures show that the level of public investment has or has not varied up and down in a stabilising manner in the economy—falling in times of expansion and rising in times of recession. This is the approach that has been attempted in the present article. The need for further study of government policy and intentions should be emphasised, however. Whether the behaviour of public investment has been stabilising or unstabilising may be due to other policies than employment policy or to factors beyond government control. The bald figures cannot therefore be used as grounds either for praise or criticism of the governments concerned without an analysis of the factors which brought about the situation which the figures reveal.

Attention is confined in this article to certain economically developed countries for which the relevant statistics are available. But, as has been observed in a recent I.L.O. report—

> Action to achieve and maintain full employment in industrially advanced countries has world-wide significance ; because of their predominant positions the maintenance of a high level of economic activity in them can do much to help all other countries. Their imports will be at a high level and they will have a growing capacity to invest in and give economic aid to the less developed countries.[1]

A study of the statistics, however, is less simple than might be expected. It is necessary in the first place to determine, with the advantage of hindsight, those movements of the economy which should be considered relevant in assessing the stabilising effect of public investment. Both history and theoretical analysis leave us with the impression that this is a straightforward matter. For historically the cyclical swings of the economy have been so pronounced that the movements of employment, total production, prices, private investment, etc., have all told the same story. Likewise in discussing a contra-cyclical public investment policy within the framework of a theoretical model, it has been assumed that the fluctuations of economic activity are such that all the economic indicators point in the same direction. In fact since the Second World War the movements of these indicators have been extremely small and in most cases have represented variations from a trend rather than reversals or absolute changes. For instance in the United Kingdom only in two years since the war—1952 and 1958—has gross domestic production failed to rise, and in five out of

[1] I.L.O. : *Employment Problems and Policies*, Report VI, International Labour Conference, 45th Session, Geneva, 1961 (Geneva, 1960), p. 32.

the ten countries selected [1] no such fall has occurred in this period. Nevertheless the rate of increase has varied and in these new circumstances it is these deviations from the trend which are the significant economic indicators. In the case of employment the fluctuations have been reflected in the number of unfilled vacancies in industry and in the amount of overtime or short time worked rather than in the actual level of full-time unemployment. Again, in the field of prices there have in fact been no falls in the general level of prices but only changes in their rate of increase since the Second World War.

This is a convenient point at which to emphasise that although we will be talking of " deflationary " and " inflationary " conditions in various countries we will in fact not have reason to refer in this respect to price movements. This is because we are concerned with the problems of stabilising the level of demand for labour and other resources in the economy by appropriate changes in public investment. Variations in prices are the outcome of two forces—changes in demand and changes in costs (especially in wage-costs and, for certain economies, import prices) and we cannot therefore take them as indicators of the strength of demand alone. When the terms inflation and deflation are used, then, they will be referring to changes in the level of demand for resources, which may or may not be correlated with comparable changes in prices.

One rough indicator of whether a country is experiencing inflationary or deflationary conditions can be obtained by calculating the annual increase in the gross domestic product after allowing for price changes. Where for any year this is found to be higher than the average increase for that country we assume that the country was experiencing inflationary conditions ; and we conclude that it was experiencing deflationary conditions if the growth rate in the year was less than the average. For the type of short-run analysis in which we are interested this criterion seems valid, for although growth rates in the longer run will depend on supply conditions—in particular on the level of capital investment undertaken—in the short run it is the level of demand which is of paramount importance unless some extraneous factor, such as a fuel crisis or a major strike, temporarily affects supply conditions.

These calculations of year-to-year rates of economic growth are presented in table I.

For the purpose of our analysis no generalisations relating to the growth experience of all ten countries can be made. Whilst

[1] Belgium, Canada, Denmark, Finland, France, Italy, the Netherlands, Sweden, the United Kingdom and the United States.

TABLE I. ANNUAL PERCENTAGE INCREASES IN GROSS DOMESTIC PRODUCTION (AT CONSTANT PRICES) FOR SELECTED COUNTRIES, 1952 TO 1958[1]

Country	1952	1953	1954	1955	1956	1957	1958	Average 1952-58
Belgium	0.9	2.9	4.6	4.8	3.8	2.5	–1.0	2.3
Canada	8.9	3.4	–3.3	8.2	9.7	–0.3	0.5	3.9
Denmark. . . .	0.6	6.0	2.0	0.1	2.0	5.4	1.5	2.5
Finland	–0.8	2.5	9.4	6.6	2.1	2.6	0.1	3.2
France.	2.5	3.4	4.6	6.0	5.2	6.1	2.2	4.3
Italy	3.0	10.0	3.4	7.8	3.8	4.7	4.2	5.3
Netherlands . .	1.8	8.2	7.5	7.8	5.1	2.4	1.0	4.8
Sweden	2.6	3.7	6.3	3.6	3.7	3.6	0.3	3.4
United Kingdom	–0.8	3.9	4.5	3.9	0.6	1.7	0.0	2.0
United States. .	4.8	4.1	–1.7	8.0	1.9	1.8	–1.9	2.4

[1] These and other figures given in this paper are derived from United Nations: *Yearbook of National Accounts Statistics, 1959* (New York, 1960) (figures for 1952 are taken from the *Yearbook* for 1958).

it is true that for many countries the deflation of 1952 was followed by three or four years of high economic activity ending in a further deflationary movement, the precise timing and intensity of these movements have varied considerably and furthermore there are several countries that do not fit into this pattern at all. Outstanding examples are the United States and Canada, which experienced a marked recession in 1954 at a time when all the European countries (except Italy and possibly Denmark) were booming. But even less pronounced variations in experience are of importance in this analysis and so it is better to treat each country separately in judging the stabilising effect of public investment.

Another difficulty is that, in assessing the extent to which public investment has stabilised the demand for resources in the economy, it is not sufficient merely to take the variations in capital expenditure by public authorities. Once again history offers no guide in this respect for, with the very marked fluctuations in employment, production, etc., experienced by free-enterprise economies until recent years, it would have required comparably marked changes in public investment in order to stabilise the economy. However, since the Second World War, as we can see

from table I above, the fluctuations of the economy have become much less marked and consequently the variations required of public investment have been less. What we must look for are not only the absolute variations in the total demands of public bodies for investment goods but also the relative changes in these demands.

In the analysis which follows we have used three criteria by which to judge the behaviour of public investment in the 1950s. Firstly we have taken changes in its absolute level after allowing for changes in prices ; secondly we have calculated the changes in the proportion of total national production used in the provision of capital assets for the public sector each year ; and thirdly we have taken the changes in the proportion of total fixed investment undertaken by the public sector each year. Any one of these three criteria or any combination of them can then be used to judge whether the behaviour of public investment in a particular year in any country added to the inflationary or deflationary forces which existed at the time or, on the contrary, acted as a stabilising device by falling in absolute or relative terms in times of inflation and rising in times of deflation. For instance we can argue on the basis of the first criterion that if the absolute demand on resources by public investors varied inversely with the general level of economic activity then policy has acted in a stabilising manner, for this makes room in an inflationary economy for other demands on resources or in times of deflation fills gaps left by falls in these other demands. But, as we have already argued, with the smaller fluctuations of economic activity this might be too much either to expect or to require from public investment. Would it not be sufficient, in other words, if public investment merely reduced its *proportionate* share either of total national production or of the total resources devoted to investment? This is the justification for our second and third criteria.

In addition to looking at the movements of the aggregate level of public investment in these countries, we also look at the movements of the two major components of this aggregate, namely public enterprise investment and general government investment.[1] The distinction between these two is that, whilst the former is primarily undertaken to satisfy a market demand for final consumer goods and services, the latter has no such market criteria to guide it. The former, for instance, would include investment by local government in municipal transport facilities and by the central government or a semi-autonomous public agency in postal services. In both these cases the ultimate services (municipal

[1] Only the absolute changes after allowing for price movements have been calculated in this case, not changes relative to total investment or gross domestic product, or both.

transport and postal facilities respectively) are primarily bought by private people and thus ultimately the investment must be determined by this market demand. General government investment, however, includes investment in such things as office buildings, roads, schools, etc. In these cases the ultimate demand is financed out of compulsory tax levies by the central or municipal government and no question of the wishes of individuals is considered except in so far as these are reflected through the political system. From the point of view of this article the importance of this distinction lies in the fact that one would expect that investment by general government would be more capable of being timed in the interests of general economic policy than investment in trading services which would have to be related to the market demand for the things produced. To use the economist's jargon, one would expect general government investment to be more " autonomous " than that undertaken by public enterprises.

This general supposition is borne out by the Economic Commission for Europe in its 1959 Survey. In a report on the " Economic Significance of the Public Sector in some West European Countries " it states : " General government investment may be somewhat more readily variable " (i.e. compared with public enterprise investment) and " relatively large counter-cyclical variations in such investments have been achieved in Austria, the Netherlands, Norway and Sweden."

* * *

With these general remarks in mind we can now present the statistical information for each country with a brief comment on the pattern, if any, which is displayed.

Experience in Ten Economically Developed Countries, 1952 to 1958

Belgium

In Belgium public investment has behaved in a markedly cyclical manner. In all the relatively deflationary years—1952, 1957 and 1958—expenditure fell in absolute terms whilst in the inflationary years it rose. This is also borne out by the relative figures, with the exception of 1952, when, despite a fall in public investment in absolute terms and a less marked fall in this expenditure as a percentage of total national production, it represented a larger percentage of total fixed investment outlays than in any subsequent years.

TABLE II. BELGIUM [1]

Item	1952	1953	1954	1955	1956	1957	1958
	(As a percentage of previous year)						
Change in gross domestic product . . .	0.9	2.9	4.6	4.8	3.8	2.5	–1.0
Change in public investment as compared with previous year:	*(1,000 million francs)*						
(a) Total	–1.5	0.8	0.1	1.1	0.9	–0.9	–0.1
(b) General government	–0.8	0.1	0.2	0.0	0.8	–0.4	–0.2
(c) Public enterprise	–0.7	0.7	–0.1	1.1	0.1	–0.5	0.1
Public investment in relation to—	*(Percentages)*						
(a) Total fixed investment. . .	23.0	22.7	20.7	22.0	20.9	19.2	20.4
(b) Gross domestic product . . .	3.0	3.6	3.0	3.1	3.2	3.0	3.0

[1] Based on figures at constant prices.

This cyclical pattern is found also when the public enterprise and general government sectors are examined individually. The latter, in particular, conforms very closely to the cyclical movements of the economy as a whole, though in the case of the public enterprise sector the contra-cyclical movements of investment in 1954 and 1958 are so small that they can be virtually ignored.

Canada

Whilst the pattern of behaviour of total public investment in Canada is not consistent, it has tended to be cyclical. In two of the three inflationary years (1952, 1955 and 1956) public capital expenditure rose very markedly in real terms, especially in 1956, when an increase of 28 per cent. occurred. In the remaining year (1955) a rise did occur, but this was significantly less than the trend over the period as a whole.

This more stabilising behaviour of public investment in 1955 is borne out by the relative figures, which indicate a decline compared with 1954 in both the proportion of total fixed investment and of total domestic production absorbed by public investment. On the other hand the relative figures for 1952 and 1956 tend to suggest that the destabilising influence of public investment in

TABLE III. CANADA [1]

Item	1952	1953	1954	1955	1956	1957	1958
	(As a percentage of previous year)						
Change in gross domestic product . . .	8.9	3.4	–3.3	8.2	9.7	–0.3	0.5
Change in public investment as compared with previous year:	*(Million $)*						
(a) Total	101	39	55	3	319	248	85
(b) General government	46	–15	58	50	93	94	101
(c) Public enterprise	55	54	–3	–47	226	154	–16
Public investment in relation to—	*(Percentages)*						
(a) Total fixed investment. . .	25.1	24.1	26.2	24.6	25.8	28.7	31.7
(b) Gross domestic product . . .	5.3	5.4	5.8	5.5	6.5	7.6	8.0

[1] Based on figures at constant prices.

those years was less marked than the absolute figures indicate, though this influence is still in general brought out.

In the deflationary years 1953-54 and 1957-58 the picture is once again complicated. Whilst in these years there were in fact increases in real terms in public fixed investment, with the exception of 1957 these increases were relatively small, and even in 1957 the increase was less than in the previous inflationary year. However, looking at public investment in relative terms during these years suggests that it did behave in a reasonably stabilising manner with marked increases in the proportion both of total production and, with the exception of 1953, of total investment being taken by public capital projects.

No pattern of behaviour appears to emerge for the two parts of the public section taken individually. Public enterprise investment seems to have a cyclical pattern lagged by one year. Thus, whilst in the first year of each two-year deflationary period (i.e. 1953 and 1957) public enterprise investment increased, in both 1954 and 1958 it fell. Likewise, whilst in 1955, during the first year of the boom, this expenditure fell, in the second year it rose by exactly 50 per cent. General government investment is even more complicated for, whilst it rose considerably in all the inflationary years, these increases were less than those which occurred

in the deflationary circumstances of 1957 and 1958. Furthermore, whilst an actual decline in this expenditure took place in 1953, it did rise by 10 per cent. during the major downturn in activity in the economy in 1954.

Denmark

Denmark's experience varies from the earlier years of the period to the later years. For the years 1952 to 1956 the pattern of public investment is cyclical rather than contra-cyclical, whilst for the final two years a contra-cyclical pattern emerges. Both the deflations of 1952 and 1955 saw reductions in the amount spent on fixed investment by the public sector after allowing for changes in prices.

TABLE IV. DENMARK [1]

Item	1952	1953	1954	1955	1956	1957	1958
	(As a percentage of previous year)						
Change in gross domestic product . . .	0.6	6.0	2.0	0.1	2.0	5.4	1.5
Change in public investment as compared with previous year:	*(Million crowns)*						
(a) Total	–10	105	55	–15	30	20	90
(b) General government	15	85	70	10	30	–10	35
(c) Public enterprise	–25	20	–15	–25	0	30	55
Public investment in relation to—	*(Percentages)*						
(a) Total fixed investment. . .	20.7	21.8	21.8	23.1	23.6	22.7	24.1
(b) Gross domestic product . . .	3.5	3.7	3.9	3.9	3.9	3.8	4.1

[1] Based on figures at constant prices.

This reduction was also a reduction relative to the total amount of investment in 1952, though in 1955 public investment measured in this manner increased. But far more significant than these movements was the 15 per cent. increase in public investment during the inflationary conditions of 1953, which also represented an increase relatively to the increase in total fixed investment in the country and to the increase in gross domestic product. However, in 1957 and 1958 public investment became stabilising in its effects, particularly in the deflationary circumstances of 1958, when it

increased markedly in both absolute and relative terms. In 1957, on the other hand, the contra-inflationary movement only occurred in relative terms.

This pattern of total public investment over the whole period is also true of general government investment. Admittedly in the deflationary circumstances of 1952 and 1955 this did rise a little in absolute terms ; but, if we allow for the upward trend of this expenditure over the period, these increases were well below the average annual increases. It is this trend of general government investment, in fact, which highlights the fall which occurred in 1957 and the subsequent rise in 1958, which represents a very distinct contra-cyclical pattern.

Public enterprise investment behaved in a largely destabilising manner in the years 1952 to 1956, and this was also true in the inflationary circumstances of 1957. In fact only in 1958 did this expenditure act as a stabilising force in the economy.

Netherlands

Public investment in the Netherlands has experienced very marked annual fluctuations, which in three years amounted to a variation of around 20 per cent. as compared with the previous year. Whilst there is a reasonable tendency for these variations

TABLE V. NETHERLANDS [1]

Item	1952	1953	1954	1955	1956	1957	1958
	(As a percentage of previous year)						
Change in gross domestic product . . .	1.8	8.2	7.5	7.8	5.1	2.4	1.0
Change in public investment as compared with previous year :	*(Million florins)*						
(a) Total	115	365	–200	78	60	320	–387
(b) General government	–86	400	–160	60	50	30	–80
(c) Public enterprise	201	–35	–40	18	10	290	–307
Public investment in relation to—	*(Percentages)*						
(a) Total fixed investment. . .	44	43	36	32	30	33	31
(b) Gross domestic product . . .	8.2	9.2	7.7	7.5	7.3	8.2	6.8

[1] Based on figures at constant prices.

to follow a contra-cyclical pattern, there are marked exceptions. Increases occurred in both absolute and relative terms in the deflationary circumstances of 1952, and more particularly 1957, but in 1958 there was a very large fall at a time when the economy was still suffering from a low level of aggregate demand. Likewise, whilst in the relatively inflationary years 1954-56 public investment either fell (as in 1954) or increased only slightly (as in 1955 and 1956), in 1953 under similar inflationary conditions an increase of over 20 per cent. occurred. This pattern for 1953-56 is reflected in both the absolute and the relative figures.

The public enterprise sector shows a very marked contra-cyclical pattern throughout the whole period except in 1958. The very large increases in 1952 and again in 1957, together with the falling off of this investment in 1953 and 1954 and its near-stability in 1955-56, represent variations which increased the stability of aggregate demand in the economy. In 1958, however, the fall of well over 20 per cent. merely aggravated the general deflationary situation. The pattern of behaviour of general government investment is predominantly cyclical. Only in 1954 did any marked contra-cyclical movement occur, whereas very distinct cyclical movements occurred in 1952, 1953 and again in 1958.

Sweden

The notable feature of Swedish experience in the period at which we are looking is the absence of any very marked changes in the rate of growth. Only in 1954 and 1958 was there any significant deviation from the trend. In 1954, with the economy booming, total public investment increased, though by a smaller amount than in the previous two years; and furthermore it fell relatively to total fixed investment and to total domestic production. This also seems to have been true of the general government and the public enterprise sectors taken individually.

It is even more difficult to assess the changes in public investment which occurred in 1958. An increase did take place in absolute terms, but it was smaller than the increase in the previous year. Furthermore, whilst an increase in the proportion of total production absorbed by public investors took place, a marked fall in its proportion of total investment occurred. This highly qualified contra-cyclical movement in 1958 also occurred in the two separate parts of the public sector, where in each case the increase was less than in the previous years.

United Kingdom

In the first of three years of relatively high aggregate demand (1953 to 1955), public investment rose in both absolute and relative

TABLE VI. SWEDEN [1]

Item	1952	1953	1954	1955	1956	1957	1958
	(As a percentage of previous year)						
Change in gross domestic product . . .	2.6	3.7	6.3	3.6	3.7	3.6	0.3
Change in public investment as compared with previous year:	*(Million crowns)*						
(a) Total	511	457	107	–68	79	259	147
(b) General government	164	234	33	61	21	194	104
(c) Public enterprise	347	223	74	–129	58	65	43
Public investment in relation to—	*(Percentages)*						
(a) Total fixed investment. . .	42.1	42.8	40.2	39.5	39.2	40.4	38.8
(b) Gross domestic product . . .	7.8	8.7	8.4	8.0	7.9	8.1	8.4

[1] Based on figures at constant prices.

TABLE VII. UNITED KINGDOM [1]

Item	1952	1953	1954	1955	1956	1957	1958
	(As a percentage of previous year)						
Change in gross domestic product . . .	0.8	3.9	4.5	3.9	0.6	1.7	0.0
Change in public investment as compared with previous year:	*(Million £)*						
(a) Total	47	137	–3	–61	14	44	–30
(b) General government	–7	26	–3	3	41	23	5
(c) Public enterprise	54	111	0	–64	–27	21	–35
Public investment in relation to—	*(Percentages)*						
(a) Total fixed investment. . .	54.3	54.8	50.3	45.5	44.0	43.7	42.5
(b) Gross domestic product . . .	7.1	7.6	7.3	6.7	6.7	6.8	6.7

[1] Based on figures at constant prices.

terms. This was also true of the general government and public enterprise sectors individually. However, in 1954-55 both the total and the individual sectors either declined or remained virtually stable, and in the case of the total of public investment the decline was very marked in relative terms as well as in absolute terms. During the relatively deflationary years, with the exception of 1958, total public investment did increase, though for 1956-57 this was insufficient to avoid a reduction in the share of total investment undertaken by public bodies, and even relatively to total domestic production no increase in public investment occurred. No generalisations can be made about the individual parts of the public sector during these relatively deflationary years. General government investment behaved in the most stabilising manner, increasing in each of the years 1956 to 1958, though it went down in 1952. Public enterprise investment, on the other hand, whilst increasing in 1952 and 1957, fell in 1956 and 1958.

United States

The effect of public investment in the United States must be judged by its behaviour firstly in the marked deflationary movements of the economy in 1954 and again in 1956-58 and secondly

TABLE VIII. UNITED STATES [1]

Item	1952	1953	1954	1955	1956	1957	1958
	(As a percentage of previous year)						
Change in gross domestic product . . .	4.8	4.1	–1.7	8.0	1.9	1.8	–1.9
Change in public investment as compared with previous year:	*(Million $)*						
(a) Total	–600	200	1,000	200	200	900	900
(b) General government	–600	200	900	100	0	900	900
(c) Public enterprise	0	0	100	100	200	0	0
Public investment in relation to—	*(Percentages)*						
(a) Total fixed investment. . .	15.1	14.8	15.9	14.7	14.9	16.2	18.5
(b) Gross domestic product . . .	2.6	2.4	2.6	2.4	2.5	2.7	3.0

[1] Based on figures at constant prices.

in the highly inflationary movement of 1955. The record for all these years is reasonably favourable. In all the deflationary years public investment increased in absolute terms and relatively to total fixed investment, though not always relatively to total domestic production. The 12 per cent. increase in 1954 was particularly noteworthy, especially if we allow for the rather isolated and short-lived nature of the recession; but even in 1957 and 1958 the increases amounted to 8 per cent. or more. In the boom of 1955 public investment continued to increase in absolute terms, but the increase was small in relation to that in the previous year. Furthermore there was no increase in relative terms, and in fact the proportion of both total production and total fixed investment demanded by the public sector fell.

This reasonably favourable contra-cyclical pattern of total public investment was almost entirely the result of general government investment, which accounts for nearly 90 per cent. of the total. Despite its slight increase in 1955 and its failure to increase in 1956 at the beginning of the deflationary movement of the economy, the marked increase in 1954 and again in 1957-58 suggests a distinct contra-cyclical pattern over the last five years of the period. Public enterprise investment has shown a much less pronounced contra-cyclical pattern, though it did increase in the deflationary year 1954. However, its absolute increase in the boom of 1955 was as large as in the recession of the previous year, and in 1957 and 1958 it failed to increase at all despite the continuing deflationary nature of the economy.

Finland, France and Italy

For the remaining three countries the published material does not differentiate between investment by public enterprises and that undertaken by private enterprises. As a result the following tables and comments are restricted to general government investment in each of the countries.

TABLE IX. FINLAND [1]

Item	1952	1953	1954	1955	1956	1957	1958
	(As a percentage of previous year)						
Change in gross domestic product . . .	–0.8	2.5	9.4	6.6	2.1	2.6	0.1
	(1,000 million marks)						
Change in general government investment as compared with previous year . . .	5.1	7.1	–1.4	0.5	5.0	4.6	1.1

[1] Based on figures at constant prices.

General government investment in Finland shows a marked contra-cyclical pattern, particularly in the inflationary period 1954-55. Despite a distinct upward trend in this capital expenditure over the whole period, which brought the total in 1958, after allowing for price changes, about 80 per cent. higher than in 1951, in 1954 there was an actual decrease in the amount spent and in 1955 the increase was extremely small. This means of course that in the relatively deflationary years 1952-53 and 1956-58 general government investment expenditure rose very considerably, and in fact only in 1958 was the rise relatively small.

TABLE X. FRANCE [1]

Item	1952	1953	1954	1955	1956	1957	1958
	(As a percentage of previous year)						
Change in gross domestic product . . .	2.5	3.4	4.6	6.0	5.2	6.1	2.2
	(1,000 million new francs)						
Change in general government investment as compared with previous year . . .	0.4	0.1	0.5	0.3	0.3	0.1	–0.5

[1] Based on figures at constant prices.

No obvious pattern emerges from the figures for France. Admittedly the first three years were relatively deflationary, and general government investment did in fact increase; but this increase continued into the following three years, which were inflationary, and it was not until 1958 that a fall occurred, at a time when conditions were relatively deflationary. Judged in fact by the final four years of the period this expenditure was destabilising rather than stabilising in its effects.

TABLE XI. ITALY [1]

Item	1952	1953	1954	1955	1956	1957	1958
	(As a percentage of previous year)						
Change in gross domestic product . . .	3.0	10.0	3.4	7.8	3.8	4.7	4.2
	(1,000 million liras)						
Change in general government investment as compared with previous year . . .	58	62	–8	0	–36	24	57

[1] Based on figures at constant prices.

General government investment in Italy moved in a predominantly cyclical manner over the period. In the inflationary circumstances of 1953 it increased, and then in the subsequent deflation it fell. Admittedly in the inflation of 1955 it did not rise ; but, as compared with the reductions in expenditure which both preceded and, more particularly, followed the 1955 inflation and which occurred in years of relative deflation, this failure of government investment to rise in this year still gives us a markedly cyclical pattern.

Evaluating the Statistical Material

It would be satisfying if, in concluding this survey, we could draw from it certain definite general conclusions regarding the behaviour of public investment. This is, however, impossible, and given the statistical nature of the study any conclusions would in any case have to be very tentative. All that can be done at this stage of the inquiry is to comment on the survey in general terms.

It is worth noting to begin with that public investment expenditure in all the countries has been far from stable. Quite apart from any trend in these outlays, the year to year changes in them have been as large as 25 per cent. or more in some cases—for example the increase in Canadian public investment in 1956. This marked instability has occurred where the fluctuations have had a cyclical pattern as well as where they have been contra-cyclical in character. This fact is important, for it would seem to dispose of the argument often levied against using public investment as a weapon of economic policy, namely that by doing so the government would have to destabilise this expenditure, which, it is implied, would otherwise be relatively stable. This is regarded as undesirable for two reasons. Firstly, it is argued that by keeping public investment stable a solid block of expenditure and employment is created in the economy which would prevent any major deflationary movement developing by providing, as it were, a sheet anchor for the economy. Secondly, it is argued that the destabilising of public investment increases the costs of any capital project because it means that projects must be hurriedly commenced without due preparation, or that they must be stopped or curtailed when partially complete or that if fairly stable orders are not given to suppliers and contractors costs are pushed up. There is considerable truth in all this, and in particular the extra costs implied by the second group of arguments need to be investigated. However, our analysis has shown that public investment, even where it does not have a contra-cyclical pattern, is unstable anyway, and it would therefore seem desirable that this instability should be used to

provide a stabilising force in the economy rather than to aggravate an already inflationary or deflationary situation. The only condition under which this would not be feasible would be if it could be shown that most public investment projects were intimately linked with the ups and downs of the economy.

The analysis indicates that only in the United States and in Belgium has there been any consistent pattern in the short-run movements of public investment. Whilst in the former country this pattern has been predominantly contra-cyclical, in Belgium it has been cyclical, tending to destabilise rather than to stabilise the economy. The other five countries for which statistics are available fall between these two extremes, having experienced no consistent pattern of behaviour of public investment but nevertheless tending, with the exception of one or two years, to have had either a cyclical or contra-cyclical pattern. Thus in Denmark and Canada the pattern has been markedly but not entirely cyclical, in the Netherlands and the United Kingdom it has tended to be contra-cyclical, whilst it is not possible to put Sweden in either category.

The second aim of our analysis was to determine the individual contributions of general government and public trading activities

TABLE XII. RANGE OF FLUCTUATIONS OF PUBLIC INVESTMENT OUTLAYS BY SECTORS, 1952 TO 1958

Country	Unit	Average annual investment (A)		Maximum range of fluctuations (B)		(B) as a percentage of (A)	
		General government	Public enterprise	General government	Public enterprise	General government	Public enterprise
Belgium	1,000 million francs	6.0	7.3	1.6	1.8	27	25
Canada	Million $	707	587	116	273	16	47
Denmark. . . .	Million crowns	429	434	95	80	22	19
Netherlands . .	Million florins	951	1,118	560	597	59	53
Sweden	Million crowns	1,404	2,115	213	476	15	23
United Kingdom	Million £	263	977	48	175	18	18
United States. .	Million $	8,557	1,314	1,500	200	18	15

to the task of stabilising the economies studied. This is particularly significant, as we have already noted, in view of the fact that the Economic Commission for Europe has suggested that general government investment is more readily variable than public enterprise investment.

It can be seen from table XII that, of the seven countries for which comparative figures for the public enterprise and general government sectors are available, there are only two where there has been any very marked difference between the maximum range of fluctuations of the two sectors. In both these countries—Canada and Sweden—the range of fluctuations of investment outlays has been much greater in the case of the public enterprise sector than in that of the general government sector. However, in four of the remaining five countries the range of fluctuations has been larger for the general government sector but not very markedly so. It is impossible to draw any conclusions on this matter from this study.

This is also true when we look at the more specific problem of the relative stabilising effects of investment expenditure in the two parts of the public sector (table XIII).

TABLE XIII. THE TIME PATTERN OF PUBLIC INVESTMENT BY SECTORS

Type of investment	Time pattern		
	Cyclical	Contra-cyclical	No definite pattern
General government . .	Belgium Netherlands	United States	Canada Denmark Sweden United Kingdom
Public enterprise .	Belgium Denmark	Netherlands	Canada Sweden United Kingdom United States

Only for six of the fourteen sectors can any fairly definite pattern of expenditure be found. Undoubtedly the most distinct case is provided by the movements of public enterprise investment in the Netherlands. This sector not only had a very high range of fluctuations but they were markedly stabilising in their effects on aggregate demand, although 1958 was a very important exception to this generalisation. Furthermore, whilst central government investment in the Netherlands experienced a similarly high

range of variation in both absolute and relative terms, these were distinctly destabilising in their effects. However, the United States, which is the only other outstanding case, has displayed the complete reverse of the Netherlands experience. Whilst the range of fluctuations in public investment outlays has been far less than in the Netherlands, it has been general government investment in the United States that has displayed such a marked contra-cyclical pattern. Belgian experience sheds no light on this problem for, whilst in both the public enterprise and general government sectors a distinct pattern of behaviour has occurred, in both sectors it has been cyclical. For the other eight sectors no reasonably consistent pattern is discernible.

It would seem, then, that we cannot distinguish between the public enterprise sector and the general government sector.

On the two issues, therefore, of the year-to-year variability of investment expenditure and of the pattern of this variability in relation to the level of economic activity in the economy, there seems to have been no valid general pattern which would permit us to distinguish between public enterprise and general government investment.

One conclusion which appears to stem from this analysis is the apparent lagged nature of the response of public investment to changes in economic circumstances if we assume that governments were attempting to stabilise the level of aggregate demand in the economy by appropriate changes in public investment. There seems to have been a distinct tendency for some governments, like some generals, to fight the last battle rather than the present one. This can be seen, for instance, in the case of the decline in public investment in Sweden in 1955 after the inflationary problem had passed. It can also be seen in the case of general government investment in Italy, which experienced marked declines in both 1954 and 1956 in both cases *following* years of inflationary pressure. The Netherlands, which appears, as we have seen, to have a reasonably contra-cyclical pattern in its public investment outlays in general, also provides a good example when in 1953 these outlays increased by well over 20 per cent. Looking at the statistics this increase appears to be in response to the deflation of the previous year, for by 1953 the economy was experiencing inflationary conditions.

Of course all these examples are merely tentative deductions from the statistical material, but they do nevertheless raise the fundamental problem of devising sensitive indicators by which to anticipate future economic conditions rather than having to rely on an appraisal of present conditions. For changes in public investment policy, like most other changes in economic policy,

take considerable time to formulate, to legislate for, and finally to execute, thus making themselves felt in terms of changes in incomes, employment and output. This has always been recognised by the advocates of a public investment policy, but the avoidance of the lag requires the derivation of sensitive indicators and also the political courage to act according to them rather than according to the current economic situation. This may involve, for instance, a decision to increase public investment in a time of inflation in the anticipation that by the time the decision begins to make its effects felt the economy will have entered a relatively deflationary period. One cannot pretend that this is easy and it is aggravated by the fact that the decision of the government on public investment policy will, apart from its direct effects on the economy, affect other people's decisions. For example a decision by the government to increase public investment now in anticipation of deflation next year might give business men more confidence and make them willing to increase their own investment outlays, thus making the economy less deflationary than the government assumed when devising its policy.

Conclusion

How should one feel, after this survey, towards the use of public investment as part of a policy of economic stabilisation? It is perhaps disappointing to find so little consistency in the statistical analysis. Nevertheless, the fact that for some countries at least, for part of the seven-year period or for part of the public sector as a whole, public fixed investment has behaved in a distinctly contra-cyclical manner suggests what is possible in this field.

This is particularly true if the difficulties of the type outlined above are borne in mind. To these technical problems must be added the general one that governments have more than one horse to handle. Undoubtedly if the stabilisation of aggregate demand for output and resources was the sole problem of economic policy then the results we have been investigating would have been far more favourable. But there are aspects of this policy problem other than maintaining aggregate demand, and at times these may be in conflict. Of these other aspects of policy the three most important are probably economic growth, price stability and the balance of payments. At times policies to deal with each of these might be consistent with each other but this need not be the case—at least, and this is what is relevant, they need not be consistent in the government's judgment. For instance in the relatively deflationary conditions in the United Kingdom in 1958 the Government chose to reduce public investment outlays

in monetary terms in the interests, as the Government saw the problem, of price stability and the drain on sterling which had taken place in the latter half of 1957. Undoubtedly this was in complete conflict with what was required of public investment policy if the Government had been solely concerned with stabilising demand.

Furthermore the results in this study seem reasonably encouraging when it is remembered that the notion of a public works policy as originally conceived was that the government had in its grasp a major force with which to drive the economy from a state of extreme unemployment typical of the traditional cyclical slump or, more particularly, of the persistent unemployment of the inter-war years, to a position of a reasonable employment level. Since the Second World War, of course, as we have already noted, the situation of most countries has been one of relatively small deviations from a full-employment path of growth. All that has been needed has been relatively small movements in public investment for short periods of time. Public investment has been required to be a pin-pricking force in the economy rather than a blunderbuss. Has it succeeded? The provisional statistical answer would have to be that, whilst it has not succeeded on a wide scale, the marked successes which have been achieved should indicate the possibilities for the future.

Communications between Management and Workers in the Petroleum Industry

An effective communications system is an essential ingredient of good labour-management relations. The problems involved in passing information from the management to the worker and vice versa are far from simple and many techniques have been evolved to encourage a two-way flow of facts, ideas and opinions. However, the attitudes of those conveying and receiving this information are likely to be as important as the techniques themselves. The subject has recently received a good deal of attention in the petroleum industry in a number of countries and this article [1] examines briefly some of the industry's experiences in this field, which are probably capable of wider application in other areas of industry.

MANY managements believe that informing employees about matters concerning the undertaking and its activities in general, or on particular issues relating to their jobs, and getting workers' opinions on these matters enables a team spirit to be more easily established in the plant, emphasises the many common interests of workers and employers, dispels rumours, brings grievances into the open before they lead to something more serious, heightens the worker's sense of the importance of his job, and, in all these ways, increases efficiency in the long run. The social purpose of communication has also been emphasised—that it tends to make work more interesting : " information constitutes one of the primary weapons in the struggle against the dehumanisation of work " [2] ; and that it helps to create circumstances more closely conforming to the worker's situation outside his work, i.e. his right as a citizen to have a voice in the government of his country. In some countries the employer is required by law to furnish the workers in the undertaking with certain information.

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[1] Based on a report prepared for the Sixth Session of the I.L.O. Petroleum Committee (April-May 1960).

[2] Comité de l'entreprise libre : *Le journal d'entreprise—Pourquoi ? Comment?* (Brussels, Apr. 1955).

Problems of Communication

However, the effective interchange of information between employers and employees (effective in the sense of being really received and understood) is impeded by a number of factors. These vary in importance from country to country, but certain of them exist everywhere.

One primary barrier is the size of the organisation. While the units of operation in the petroleum industry are not, with a few exceptions, abnormally large, they frequently involve the grouping together of between 1,000 and 2,000 people. It inevitably follows that various levels of authority and divisions of functions are established inside the operating unit—oilfield, refinery, or head office. In a refinery, for example, there may be as many as six intermediate levels between the worker and the general manager. The possibility of the higher management meeting on a day-to-day basis with the process or maintenance worker, knowing his general attitude towards the organisation and communicating the management's aims, is therefore remote. When on top of such a hierarchy are superimposed the head office levels of management both in the country of operation and, where the enterprise has affiliation with a co-ordinating organisation abroad, overseas, it becomes difficult to foster a sense of unity inside the undertaking. A normal consequence of this is the difference of outlook between the top and bottom levels in the organisation. Managements, in communicating with the worker, will stress matters important for the efficiency of the undertaking—working together, loyalty, the market situation—which will appear real to them but which are likely to be abstractions to the worker who, from where he stands, views the organisation in more immediate terms—relations with his supervisor, his trade union representative and the group of employees he works with, and the conditions and interest of his job. In addition, the task of conveying to the worker a sense of the importance of his own job becomes very difficult; for, with operations on such a large scale, a feeling of insignificance and powerlessness arises in the worker, which makes him indifferent towards the aims of the organisation as propounded by the management.

Another accompaniment of the increasing size of the organisation has been the further division of labour. While the techniques of the petroleum industry are those of the age of automation, monotony is still present in the keeping of a constant watch on temperature, pressure and flow indicators, dials and gauges. Monotony of work in modern industry induces an attitude of apathy in the worker which is very difficult to break through.

The same result is caused by another feature of large-scale operations, which may be termed " rule by organisation ". Big organisations tend to have highly systematised procedures. There are, for example, rules to ensure punctuality, regular attendance, good behaviour ; rules controlling smoking habits, habits of dress, the bringing in and taking out of parcels, talking ; rules concerning shift workers leaving the job before their relief arrives, and so on. While these rules are usually necessary for both the efficient running of the undertaking and the safety of the workpeople, they are likely to appear to the worker as restrictions on his freedom of action and on his individuality ; this reinforces the feeling of helplessness and lack of participation in the determination of many affairs which are of considerable importance to him in his daily life.

The impersonality and apparent lack of purpose of industrial life will have an even more striking effect on workers who have only recently entered industry in newly industrialising countries, having been formerly nomads or cultivators, as is the case in a number of Middle East oil countries. The work of a tribal community is often varied, carried out in long-established ways, and there is a sense of belonging, the status of each being clearly defined. The new requirements—a strict adherence to work schedules, a multiplicity of rules ; the new environment—the complex machinery with its intricate controls ; different scales of values—the emphasis on material factors ; all these make the basic purposes of the undertaking a difficult matter to convey to the worker.

Another matter which may raise barriers to communication between management and workers is what has happened in the past. In many countries having a long industrial tradition memories of bitter relations between employers and employees of decades ago are still strong, and even where none who had direct experience of these times remain, tales of unpleasant incidents and injustices that occurred are carefully passed on from father to son. Under such conditions communications from the management are regarded as propaganda and communications to the management (apart from negotiations) as a waste of time.

A further consideration is that of the social division inside an establishment. Managers, other salaried employees and hourly-paid workers often form distinct groups in the undertaking, which may exhibit quite marked differences—in method of payment (on a monthly or weekly basis), ways of dress and speech and areas where they live. Other factors inside the undertaking may tend to emphasise these distinctions, such as a special canteen for the management, another for other salaried employees and the third for manual workers. Managerial incentives may include " status symbols "—large well-furnished offices, big cars and a considerable secretarial

staff. Besides these divisions, which, by making the management more inaccessible, and by generating jealousy or perhaps a feeling of awe on the part of the worker, can greatly impede communication between different levels in the organisation, there are many other group divisions in industry—such as those between shift and day workers, process and maintenance groups, and staff (advisory) and line (directing) departments. Where foreigners occupy managerial positions in the undertaking, as is the case in certain developing countries, an anti-colonial feeling engendered by the past may be a serious barrier to effective manager-worker communications. In addition, in these countries the division between social categories may be more rigid and the status accorded to the higher levels in industry more marked than in highly industrialised areas.

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Many methods have been employed in the petroleum industry to improve employer-employee communications and overcome the obstacles mentioned above. These may be classified according to the channels through which they are applied, i.e. through management representatives or through employee representatives. In discussing these methods no attempt is made to cover all the media involved ; only those which appear to be among the most important are mentioned.

Communication through Management

The Formal Line Relationship

The traditional channel of communications between the management and employees has been the hierarchical one—by the passing of directives and information from top management through middle management and first line supervisors to the worker at the operating level, and (more recently) the transmitting of workers' reactions, opinions and suggestions upwards. As a two-way medium for conveying information about plans, procedures and opinions, the chain-of-command channel is felt by the managements of a number of petroleum undertakings to be the principal way of communicating with employees. Certain methods have been adopted to assist communications through the line system.

It is common practice in the petroleum industry for there to be written statements of personnel policy for the guidance of various levels of employees in the undertaking. Four types of these statements will be considered—personnel policy manuals, supervisors' manuals, works rules and employee handbooks.

Personnel Policy Manuals.

The personnel policy manual is usually drawn up for the guidance of higher levels of management. Reference to its contents is often confined to the middle management and interpretation of its clauses is usually the responsibility of the personnel manager. It frequently deals with a wide range of subjects concerning working conditions and the actions which should be taken by managers in relation to these conditions. These subjects may cover such broad areas as employment, leave, holidays and vacations, pay procedures, housing and pensions. The policy to be followed in each of these areas is often specified in considerable detail.

For example under the heading of employment may be mentioned new engagements, transfers and terminations ; the discretionary limits managers are subject to when hiring, transferring and terminating the employment of personnel; the contacts to be maintained with public employment offices ; the principles to be considered in the recruitment of aliens, previous employees, married women, relatives and older persons ; the procedures for hiring, medical examinations and reference checks ; the essential subjects to be mentioned during induction, such as secrecy requirements, fire regulations and the pension fund ; the conditions under which transfer may occur and details of expenses to be paid on transfer ; the different types of termination, discharge for cause, termination pay, payment in lieu of holidays not taken, references, age of retirement and, in the event of the death of employees, details of compensatory payments.

Supervisors' Manuals.

The supervisor's manual is a fairly common publication in the petroleum industry, containing information for the benefit of the supervisor similar to that outlined above, but in less detail. It is usually concerned with personnel policies, supervision, labour legislation and the collective agreements. While some manuals are primarily concerned with rules and regulations, others stress the human relations' aspect of the supervisor's work—his responsibility in establishing a friendly and progressive climate in the enterprise. Some manuals are exclusively devoted to the techniques of supervision—for instance how the supervisor should administer reprimands—

> . . . talk to the man privately ; discuss facts impartially and impersonally ; be in possession of all the facts ; be prepared to interpret company policies and rules ; keep emotions under control ; create an atmosphere of acceptance rather than defence ; keep in mind that the purpose of the reprimand is not punishment as much as training ; and select the best time for correcting a man.[1]

[1] Supervisors' manual of the Humble Oil and Refining Company (United States).

Works Rules.

At a lower level again are works rules.[1] They are directed primarily at non-supervisory employees and deal with a variety of subjects connected with working conditions, although one common denominator among them is concerned with the conduct of employees. They are frequently required by law to be drawn up in the undertaking, as in France, Japan and the United Arab Republic. They have also been widely established on a voluntary basis in the oil industry in such countries as Burma, Canada, Colombia, the United Kingdom and the United States. The contents of works rules vary considerably from country to country, often depending on the degree of development of labour legislation or collective agreements. Thus in a country with a relatively young labour movement (as in Japan and some parts of South America) the scope of the rules may be wide, covering wages, hours and working conditions as well as rules of conduct, safety, procedures for hiring and dismissal and so on. In others, such as the United States, they may be quite narrow, dealing primarily with rules of conduct.

In view of the importance of these rules special steps are often taken to bring them to the attention of employees. In some countries it may be required by legislation that the employer must post up the rules in a conspicuous place in the undertaking. They may appear in employee handbooks (a common practice in the United States), as an appendix to the collective agreement, or be part of the contract of employment form. A principle which has emerged from arbitrators' decisions in the United States is that sanctions applied for the breach of works rules will not be upheld where it is not reasonably certain that employees can easily familiarise themselves with these rules.

Employee Handbooks.

These handbooks, which are quite common in the petroleum industry, are normally given to the new employee when he commences work in the undertaking. They nearly always contain something about the industry, the operations and history of the undertaking, rules and regulations, working conditions and benefits.

Thus an employee handbook in an Argentine oil company mentions the history and organisation of the company as a whole, its history and operations in Argentina, its products, opportunities for promotion, educational facilities, various safety aspects and welfare matters such as medical services, canteens and accident insurance. In the French petroleum industry employee handbooks

[1] See *International Labour Review*, Vol. LXXXII, No. 3, Sep. 1960, pp. 262 ff.

give information, in particular, on the benefits which have been established either under the collective agreement or by the company itself, such as sickness, vacation and pension plans.

Organisation charts, showing the lines of authority in an undertaking in a pictorial or graphic form, may be included in the handbook and are useful in giving employees a bird's eye view not only of the line of command stretching above them but also of the organisation and to a lesser extent of the functions of other departments or areas in the enterprise. However, they appear to be frequently a tool of higher management communication, confined to department heads and above; certain enterprises take the position that this approach is justified because of the controversies arising among personnel about their relative placing on the organisation chart.

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In addition to the written statements of personnel policy discussed above, there are also day-to-day methods of passing on information or orders quickly through formal channels of communication.

One, of course, is the " face-to-face " contact between managers and supervisors, and supervisors and workers. Then there are the daily circulars or notices putting orders and other information in writing for clarity and reference purposes. In some cases to ensure that particularly important matters have been brought to the attention of employees, the latter may be required to sign a statement to the effect that they have read the notice.

A method of growing importance in recent years in the petroleum industry in such countries as Argentina, Canada, France, Indonesia, Peru, the United Arab Republic, the United States and Venezuela is the practice of meetings. These meetings may be departmental or of all management personnel. They may be between supervisors and personnel working under them. They may have a directive or informative purpose or they may have a consultative aspect about them. They are usually concerned with obtaining and passing " down the line " both information of a general nature on such matters as company activities, objectives, problems, plans, organisational changes and personnel moves, and information on specific questions such as price levels, technical data, company policies and working conditions. In certain undertakings particular stress is laid on the need for informality in meetings between supervisors and workers and the desirability of developing the habit of encouraging questions from the latter so that communications will really be two-way rather than merely downwards.

The line channel of communication is used primarily for the exercise of authority. The latter is a very delicate matter. The

growing consciousness, on the part of both the worker and the management, of the individual's right to be treated with dignity and respect (reflecting to some extent the recognition of such factors in the field of citizenship) has meant that implicit obedience to orders without any questions on the worker's part is in many countries a thing of the past. How orders are to be communicated has become an important consideration for management, and through supervisory training courses, supervisors' guides and bulletins, and other media, supervisors are often exhorted to pay greater attention to human considerations in the exercise of their functions.

Direct Communications

The communication channel already described involves a number of intermediate levels. There are, however, certain media—such as employee magazines, management letters, management-worker meetings and films—through which the management tries to reach the workers directly; and others—such as opinion polls and suggestion schemes—whereby the management attempts to find out the workers' opinions, attitudes and ideas on various subjects. Some of these are described below.

Employee Magazines and Newspapers.

One of the most widely used [1] and long-established media for communicating with employees in the oil industry is the employee journal. For example one large oil company at the end of 1955 had more than 45 magazines and newspapers for employees and several others were in the course of preparation; and at that time the combined circulation of these publications was well over 200,000.

There are normally three main levels at which such magazines are published. In the oil industry, where enterprises usually consist of a number of different plants and often operate in several countries, it is frequent practice for there to be a magazine for the company as a whole, prepared at its head office and distributed to all employees throughout the area where the company operates. At the more restricted level are magazines catering for one particular region of the enterprise's operations. At the third level are the oilfield and refinery publications, correspondingly more numerous, frequently being newspapers rather than magazines.

The principal function of an employee periodical has been conceived by one management as the provision of a regular source of

[1] A calculation made in 1953 gave the following approximate numbers of house journals in existence in some of the highly industrialised countries of the world: United States 6,000; Great Britain 1,200; Netherlands 350; France 200; Federal Republic of Germany 100; Belgium 60. See Union des industries métallurgiques et minières: *Le journal d'entreprise* (Paris, U.I.M.M., 1953), p. 8.

information about the activities of the undertaking, both local and world-wide, and about the employees themselves. By publishing news about employees it can foster the feeling of belonging to a community in which there are strong ties of personal comradeship and can create a feeling of pride and satisfaction in being associated with the activities of the undertaking. Moreover, by putting each individual " in the picture " it gives him an added interest in his job. The employee periodical can also serve the subsidiary, though important, function of providing an opportunity for employees to write about subjects that interest them, even where these have no connection with the undertaking's activities.[1]

Of course the aims and contents vary to a certain extent according to the level at which the magazine is distributed. Those at the top level often concentrate primarily on promoting unity inside the organisation. Their personal impact must be more limited than those produced at the regional or plant levels. They are directed at a very wide audience with different national backgrounds, customs and traditions, with a great variety of tastes and interests, and drawn from different educational levels. These magazines usually contain general articles and stories (a cultural section is a common feature—with reviews of books and films), articles about the oil industry in general, news about the general activities of the company (plans for new extensions to plant, high level personnel in the news, visits by important public figures to the installations). They appear to aim at a rather sophisticated audience and particularly at salaried employees speaking the language of the country where the enterprise is based. They frequently have something of a public relations function.

Magazines concerned with a particular region or country often cover social topics—including both information of a personal nature (births, christenings, engagements, marriages, promotions, transfers, illnesses, retirements, deaths, new employees), and of a collective nature (sports, religious and scholastic activities and those connected with public services) ; general company activities—either operational developments, expansion or improvement in installations, or activities of public interest—services rendered to the company either in road safety programmes or in disasters such as fire, flood or epidemics ; departmental activities inside the undertaking—e.g. production or safety records—and cost reduction programmes ; and specially important aspects of individuals' work inside the enterprise—contributions to efficiency, cost reduction, exceptional acts in times of crisis, high attendance or punctuality records.

[1] *Employee Publications*, Shell International Petroleum Company, Ltd.

At the local level—oilfields and refineries—there is usually a separate newspaper or magazine (the former is more common). Information on general aspects of the operations of the undertaking are largely replaced by local news such as plans for plant extensions, new plants and buildings at the refinery or oilfield itself. Heavy emphasis is laid on the social aspects mentioned above—particularly outings, picnics, dinners and sporting events ; and on matters affecting individual employees (their interests and hobbies), and the achievements in safety or production of local departments. The local newspaper is usually a much more modest affair than the company magazine, as it has to be for cost considerations in view of its restricted circulation.

However, it may be the principal way used by the management to convey important information or stimulate interest in particular matters. One refinery publication in the Netherlands gave considerable publicity to the election of representatives to the works council, with the aim of getting more workpeople to vote. There were preparatory articles—written by a member of the works council who was also on the editorial board of the newspaper—describing the rights and duties of the works council and its value as a means of two-way communication. At the election the highest vote ever recorded at the refinery was obtained.

Subsidiary Employee Publications.

Besides the employee magazine there may be additional publications of the same sort, put out by the management from time to time for the information of employees. Some of these aim to give news quickly rather than waiting for it to be put in the employee magazine. Others are directed at specific groups, such as the higher levels of management, salaried employees, or supervisors. Some celebrate particular occasions, such as the year end, or a special anniversary of the undertaking's operations. There may be certain types of information, merely touched upon in the employee journal, which are dealt with at more length in special publications.

Out of this great variety of subsidiary publications, three may be cited which are common in a number of petroleum enterprises in various countries.

Many undertakings in the Netherlands, the United Kingdom and the United States, for example, cater for the employees' more general interests by issuing booklets from time to time on a wide range of subjects, some of which may have only a tenuous connection with the petroleum industry, covering items of general, economic and social interest like agriculture, architecture, education ; other pamphlets may be put out having a more direct application to the

industry and dealing with such topics as the employment of insecticides and other petroleum products in the home and garden, the economic relationship of coal and oil, the introduction of electronic processes in the office, and the different uses of plastics. The purpose of the latter is to inform employees both for their own interest and so that they will be in a position to answer queries from the outside public on general matters relating to the company and its products, and to act as a " rumour stopper ".

There may also be regular publications for a fairly limited group of employees—particularly supervisors. The supervisors' bulletin is a frequent publication, for example, in the petroleum industry in several Latin American countries. The level of news given in the bulletin is a little above that distributed to the average oilfield or refinery worker, and the news is given in rather more detail. The subject-matter deals mainly with operational activities, although supervisory methods are a frequent feature too. The purpose of such a bulletin is to promote a feeling of unity among supervisors and to improve their skills.

Finally, a special publication not primarily directed towards employees, but nevertheless of considerable interest to them, is the annual financial report of the enterprise. An important communications development in recent years has been the modified annual report prepared especially for employees. Its forms can be various—booklets, notices, articles in employee journals, even films. The aim here is to give workers some knowledge of the enterprise's business position and its economic and financial background. Sometimes follow-up measures are taken ; for example in a petroleum company in the United Kingdom joint consultation committees discuss the annual report shortly after its publication and suggestions are obtained on how the presentation of the report can be improved. Some companies produce special films dealing with the year's operation and the financial position of the enterprise. In certain enterprises, however, the management do not feel that annual reports—even in a simplified form—are suitable for distribution to all levels of employees, since they may be misunderstood or misinterpreted. Other managements, while not taking any active steps to distribute their annual report, say that any employee can obtain it on request.

Films and Filmstrips.

Films and filmstrips are widely employed in the oil industry. A number of enterprises have a stock of films made to their specifications, which are kept in a central film library and to which additions are made at regular intervals. Very frequently local

language versions of these films are produced. Some enterprises have a full-time unit for the production of films and filmstrips.

The film has certain advantages over other media. It can get information across to an audience of a low educational standard. One film may serve many levels of employees and also have a public relations function. There are, however, certain disadvantages such as cost and the fact that films quickly become out of date. It may also be difficult to find suitable times for employees to attend film shows.

The matters dealt with fall into fairly well-defined groups. Firstly, there are films about the oil industry in general—exploration, production, refining, transportation and marketing processes being described in simple language. Secondly, the specific activities of the enterprise may be covered, such as the erection of a new refinery, exploration, the laying of pipe lines, or research. Thirdly, there may be films concerned with developments in sectors of activity where the products of the enterprise are used—such as air transport, motor racing, or agriculture. Finally there is another group covering a much narrower field, i.e. technical films concerning safety, annual reports, benefit plans and suggestion schemes.

These types of films are rather inflexible. They cannot be quickly made to bring topical matters before their viewers and it may be difficult to adapt them to the needs of a particular situation. Two techniques are used to overcome these disadvantages. One is the film magazine—dealing with a series of subjects of current interest to the enterprise. The other device, which has recently become common in the communications field, and which is cheap and adaptable, is the filmstrip—a combination of tape-recorded commentary and photographic " stills " joined together in a continuous strip for projection. Filmstrips may be used to pass on general information—on matters such as the activities of the undertaking or the enterprise in a particular year, its finances, its history—or as a means of teaching skills, as with case studies on human relations for supervisory training. They are commonly prepared by the head offices of petroleum companies for distribution to their various centres throughout the world ; but, because of their low cost, they may be made locally to fit exactly the need required, when they have the added advantage of being filmed in the local setting, which heightens their reality to the audience.

It was mentioned above that a difficulty encountered in the use of films was to find a suitable time of showing them to employees. Certain enterprises run lunchtime film shows, a solution that has met with varying success. Special evening shows for workers and their families are also commonly arranged. Some enterprises have

gone further, by renting large cinemas and inviting both employees and shareholders to attend a three-hour film show.

* * *

Other methods of direct communication, such as suggestions schemes, bulletin boards, opinion polls, product displays, posters, company visits for employees and their families, which can also help to put across to employees various aspects of information, are frequently used in the petroleum industry, but can only be mentioned in passing here.

Communications through Employee Representatives

Undoubtedly one of the most important two-way channels of communication is that between management and employee representatives, both through works councils and through the trade unions themselves. Face-to-face discussion between the management and workers' representatives enables information to be given by the management which can, if necessary, be elaborated on or clarified, while workers' opinions, suggestions or objections on the proposed measures can be stated and their views brought forward on matters of common concern.

The I.L.O. has considered the question of consultation at the level of the undertaking important enough for the adoption of special international instruments.[1] It has been the subject of numerous I.L.O. reports as well as of articles in the *Review*. It will therefore be treated here in the barest outline, although, as mentioned above, it is a major method of communications.

In the petroleum industry consultative machinery appears basically to take the form either of special bodies elected by the employees to confer with the management, or more simply of using for other purposes the existing negotiation structure set up between the management and trade unions at the level of the undertaking. This consultation may have technical, economic or social functions ; it may involve the receipt of information and the putting forward of suggestions and opinions.

The Works Council

There is a group of countries where the use of consultative bodies is widespread in the petroleum industry, either because their

[1] The Co-operation at the Level of the Undertaking Recommendation, 1952, and the Resolution concerning Consultation and Co-operation between Employers and Workers at the Level of the Undertaking, adopted by the International Labour Conference at its 35th Session in 1952. See *Official Bulletin* (Geneva, I.L.O.), Vol. XXXV, 1952, No. 2, pp. 12 and 94.

establishment is statutorily required or because there is a traditional use of such bodies in industry as a whole. For example in the Federal Republic of Germany, under the Works Constitution Act [1], works councils, which must be established in undertakings with at least five workers, are composed of workers' representatives only, elected by the workers of the undertaking. In general the duties of the works councils are to make recommendations to the employer for action which will benefit the undertaking and its employees, to see that legislation, collective agreements and works agreements are properly applied, to take up well-founded employee grievances with the employer, and to promote the employment of disabled persons in the undertaking and of others in particular need of assistance. Under the law works councils have been given certain rights concerning social, personnel and economic matters. In addition, the law provides for the establishment in undertakings with over 100 workers of an economic committee composed of equal numbers of management and workers' representatives and having advisory functions.

Works councils are likewise required by legislation in the Netherlands [2] in undertakings having over 25 employees. The employer or his representative acts as chairman and is moreover required to collaborate with the works council and to furnish it with all the information necessary for it to carry out its functions; for example he must periodically report to it on the economic position of the undertaking and consult it before establishing or revising any rules of employment. The works council must do all in its power to ensure the best possible running of the undertaking. In order to do this it has been given certain powers and duties. These include participation in the management of welfare schemes and other institutions of benefit to the workers; supervising the application of statutory provisions and collective agreements; discussing certain working conditions not covered by the collective agreement, such as the fixing of holiday periods, duty rosters, mealtimes, etc.; bringing to the attention of management measures contributing to the improvement of the running of the undertaking, both from a technical and economic point of view; and, finally, handling requests, complaints and grievances from the employees.

Similarly, in France all undertakings with 50 workers or over must have a works committee.[3] There are two separate groups

[1] Works Constitution Act, 11 October 1952. See I.L.O.: *Legislative Series*, 1952 (Ger. F.R. 6).

[2] Works Councils Act, 4 May 1950. See *Legislative Series*, 1950 (Neth. 2).

[3] Ordinance of 22 February 1945. See *Legislative Series*, 1945 (Fr. 8).

represented on these committees, the one covering manual and clerical workers, the other supervisory grades such as foremen, engineers and heads of departments. The role of the works committee in improving working and living conditions is purely advisory ; it may make suggestions about a better arrangement of hours of work, scheduling of holidays, equipment, health and safety conditions, and some aspects of wages. It must not, however, be a body for the formulation of grievances. Welfare schemes (including canteens, day nurseries, holiday homes, sports schemes and vocational training centres) are, as a rule, managed by the works committees themselves. They also share responsibility for welfare and medical services in the undertaking. On economic and financial matters works committees have the right to submit opinions and suggestions on all important questions affecting the organisation, management and the general working of the concern. In fact, consultation on these questions is compulsory. Every year the head of the undertaking must supply information to the works committee on the general economic position of the undertaking—products, orders, sales, plans to improve efficiency and profits. The works committee may make suggestions about the use of profits and express opinions on price increases. In addition, it has the right to delegate two of its representatives to the board of directors, whose meetings they attend in an advisory capacity. Works committees must meet once a month, and where a central works council exists, it must meet at least once every six months at the head office of the enterprise. The chairman of these meetings is a management representative. It is also the duty of the works committee representatives to pass on information about their activities to their constituents. However, on questions relating to manufacturing processes, they must maintain professional secrecy.

Joint consultative committees are a common communication medium in the oil industry in the United Kingdom. Their chief concern is welfare, safety and production matters—i.e. such items as canteens, showers, lockers, parking and transportation, elimination of work hazards, protective clothing, productivity (including the cutting of costs and absenteeism), and discussions of the future plans and policies of the enterprise.

There is another group of petroleum producing or refining countries where consultation committees are just beginning to take root or where, while they have been in use for a fairly long period, they only cover a limited range of subjects. For example in the United Arab Republic a law [1] has recently been passed requiring the establishment, in undertakings having 50 or more employees,

[1] Labour Code, April 1959. See *Legislatives Series*, 1959 (U.A.R. 1).

of labour-management committees consisting of six members, half representing the employer and half the workers. The chairmanship of these committees is normally to be assumed alternately by a representative of each party. The function of these committees is advisory, but a representative of the administrative authority may intervene in the event of disagreement. Such matters as improvement of work organisation, productivity and working conditions, safety, training, social relations and the fixing of deductions from workers' wages for damage to materials and equipment fall within the ambit of their advisory responsibilities. In their recommendations, they must be guided by usage, justice and prevailing social and economic conditions, bearing in mind the necessity for increased production.

There appears to have been considerable development of consultative machinery in Japan in recent years, concerned with the elaboration of the collective agreement and the two-way exchange of information. Committees have been set up on the management's initiative in response to the recent development of trade unions ; and, although at present they may be regarded as rather a one-way channel, a method of communicating the management's proposed actions, they do provide the means for full exchange of ideas and opinions between the parties.

In other cases the range of subjects dealt with is limited and rarely concerns production or administrative questions. In Argentina and Colombia there are committees in the petroleum industry whose primary concern is to discuss complaints and grievances in connection with the application of labour laws, collective agreements and company regulations. In Venezuela the workers' representatives take part in the formulation of welfare schemes and sit in an advisory capacity on various recreational committees set up by the companies. Similarly in Brunei and Sarawak there are welfare committees on which the workers are represented usually under the chairmanship of the welfare officer.

Management-Union Consultation

Apart from these separate bodies set up for joint consultative purposes there may also be consultation on many matters between management and union representatives, often using the existing negotiating machinery. These consultations may take place in addition to consultations through the works committee (as frequently happens in the United Kingdom) or where no such committees exist (as, for example, in the United States). Consultation may be secured by virtue of the fact that many of the subjects included in the collective agreement are those which in the countries having

separate consultative machinery are usually considered appropriate for discussion through this machinery. In Mexico, for example, where a single undertaking, the Petroleos Mexicanos, has concluded a collective agreement with the petroleum workers' union, it is stipulated in the collective agreement that the general executive committee of the union, the management of the undertaking and the competent authorities are jointly responsible for the interpretation and implementation of the agreement. They are concerned not only with such matters as conditions of work and social services but also with other questions such as the administration of the undertaking, finances, production and productivity. In the United States, also, collective agreements tend to cover a wide and perhaps widening field; this approach seems to be preferred to that of setting up separate committees for consultation on matters of common interest.

In a broader sense, whenever management and union meet together, whether to negotiate on a particular issue or on a question of interpretation of some clause of the agreement, an opportunity for the passing of information and suggestions arises, although under the stress of actual negotiation the kind of information presented may be accepted only with considerable reservations by the other side. Nevertheless, a substantial amount of valuable data, not only on such matters as the financial and economic position of the company but on the attitudes of the two parties and about particularly irksome conditions inside the refinery or at the oilfield, may be exchanged. The collective agreements which result from negotiation are also a valuable method of conveying information.[1]

Other Methods

Besides two-way communication channels between management and employees through the works council or the negotiating procedures, there is another avenue which exists, sometimes overlapping the first two, sometimes clearly separate from them, but often having an indirect connection with them. This is the contact that exists in a number of countries between management and workers through shop stewards or employee representatives. These representatives are concerned with carrying out certain duties on behalf of employees or unions at the plant level. A few examples from the petroleum industry in different countries will suffice to illustrate the variety in their functions.

In France the employees' representatives *(délégués du personnel)* are the subject of legislation. Their numbers depend on the num-

[1] "Some Aspects of Collective Agreements in the Oil Industry", in *International Labour Review*, Vol. LXIX, No. 1, Apr. 1954.

ber of workers employed in the establishment, and they must be allowed sufficient time during working hours to carry out their duties. They meet as a body with management at least once a month, although on questions concerning certain groups of employees or departments, or a particular department, the representatives actually concerned may meet management separately. Their functions are to transmit to the employer (and where relevant to the labour inspectorate) individual or collective complaints concerning the application of labour legislation on such matters as wages, and the protection, health, safety and insurance of the worker, although the worker may present the complaint himself—either alone or accompanied by a representative. The latter may also transmit to the works committee suggestions and observations from the personnel on all matters on which the works committee is competent to act.

In the oil industry in the United Kingdom the shop steward system is well established. The shop stewards are, almost without exception, full-time employees at the plants where they carry out their duties. While there is some variation between the different refineries, in most of them there are elected or nominated representatives from the various unions concerned who deal with management on day-to-day issues that arise either from the collective agreements or the grievance procedure or matters of common concern such as safety or transportation questions ; they are usually also responsible for the collection of union dues. In some cases they may be represented on the committees which deal with management on the negotiation of wage rates. They may meet management in a body at regular intervals to discuss matters of general concern to all the trade union representatives in a refinery ; they may also confer on a day-to-day basis with department heads or supervisors on the fixing of piece rates in a particular section, or the organising of shift rosters.

Shop stewards also exist in many oilfields and refineries in the United States, and in certain cases in Canada as well, sometimes taking part—in conjunction with the international representative or branch agent of the union—in collective bargaining with the company (although this responsibility may also be left entirely to the full-time union officials). They are also very frequently concerned with the processing of grievances.

A similar situation exists in the Mexican oil industry, where under a single agreement concluded for the whole industry matters arising at the plant level are dealt with by local management and the departmental delegates appointed by the union. Should the matter remain unresolved, it is referred to higher levels of management for settlement.

The Grievance Procedure

An effective system of communication and the co-operation it implies between management and workers cannot exist where grievances do not have a way of being expressed and their causes eliminated. It is common practice in the oil industry in a number of countries to have formal procedures for bringing up and resolving grievances. These are to be found in the petroleum industry in such countries as Burma, Canada, Colombia, the Federal Republic of Germany, France, Iran, Mexico, the Netherlands, Trinidad, the United Kingdom and the United States, and in general they do not differ from the procedures to be found in industry as a whole in these countries.

In a number of countries the question of grievances is spelt out in the collective agreements made between the two parties. In Canada, the United Kingdom and the United States almost all collective agreements found in the oil industry make provision for the settlement of disputes arising out of the collective agreement. Time limits are also often attached to each step in these procedures. In Mexico almost exactly the same method for handling grievances is followed. At the initial stage the local union delegate discusses the matter with local management representatives. Then the question can go to the next level, usually the departmental manager; finally there may be discussion between the management of the Mexican Petroleum Company and the general executive of the union, time limits being specified for each stage. The matter may also go on to outside arbitration. Alternatively the worker can submit his case directly to the labour court.

In the oil industry in other countries the works council may be important in settling grievances. For instance in the Federal Republic of Germany, although there may be no formalised grievance procedure, complaints are usually discussed at the foreman level and from there taken up through the works council with management. Where no settlement is reached, the matter may be taken further by the representative union and top management.

Another variation is found in France, where employee representatives are particularly concerned with the handling of grievances. In the petroleum industry in this country, as mentioned above, complaints are either taken up through various levels of management by the worker himself or in conjunction with the employee representative, or by the latter alone. Should no satisfaction be obtained, the matter can be taken to the labour courts or referred to a joint arbitration committee for the industry.

In some cases the government department concerned with dispute settlement intervenes in the grievance procedure at an

early stage. For example in the oil industry in Iran, when a dispute arises it is required by law to be investigated first by a reconciliation committee composed of a worker representative and an employer representative (who will be a section head from the undertaking concerned). This committee may settle the matter if the two parties agree. If settlement is not reached, however, an adjustment board or " unanimity board ", composed of a representative of the workers and one of the employer (the latter being the head of the department) and a representative of the Ministry of Labour, considers the case and must announce its decision within a week. Should the board not arrive at a unanimous decision, the matter is referred to a higher body—the disputes settlement board—whose decision is final. This board comprises three government officials, two employer representatives (one of whom will be the head of the personnel division of the undertaking, the other a representative of the refinery manager) and two workers' representatives.

The Utility of Communications Techniques

A number of studies made by independent observers question whether in fact the development of procedures such as those described above have been effective in improving employer-employee communications.

The emphasis by managements seems to have been on developing new techniques to put across information. There seems to have been much less concern about whether this information was wanted and understood or what the workers' opinion of it was.

For example there is evidence that in many respects employee publications are not fulfilling the purpose for which they were brought into being. It may be that the top management is not taking the interest it should in a publication ; the editorial staff may not be kept sufficiently informed of vital matters such as new plans for expansion or organisational changes ; or the journal may not be publishing articles that interest employees. A survey of some 50 magazines in the United Kingdom showed that only 10 per cent. of the items were devoted to personal news and features on employees. Some touched on such remote subjects as heraldry and London museums. The space given to suggestion schemes and joint consultation was surprisingly small.[1]

Failure to arouse interest may also be due to overcautiousness. In a survey conducted by the Bureau of National Affairs in the United States a tendency was noted for these publications to avoid certain subjects—some of them controversial issues but

[1] See C. Chisholm (editor): *Communication in Industry* (London, Business Publications, 1957), pp. 82-83.

nevertheless often ones of vital interest to employees—such as the introduction of new methods, personnel policies, and disputes between the company and the trade unions.

Another reason why a journal may not be achieving its communications aims may be that it is generally thought to be biased in favour of top management viewpoints and is therefore regarded as a " management mouthpiece ". Some managements, of course, consider that that is exactly the purpose of a company magazine, but others take the opposite view. They feel that it is essentially neutral and that this neutrality is in itself a vital condition of its success and its effectiveness. Nevertheless it may be very hard to get this impression over to employees, especially when official statements of policy appear in the magazine from time to time, and particularly in countries where the barriers to communication mentioned earlier are very strong.

Many editors, in accordance with the view that such publications cater primarily for the interests of employees, attempt to obtain their direct participation by inviting them to contribute stories or articles, through sections devoted to questions and answers or letters to the editor, or by organising photographic and similar contests. One suggestion that has been put forward by a productivity team[1] is that, if the magazine is to be an effective form of communication, if it is to avoid being regarded as management's mouthpiece, then workers' views on important issues should appear side by side with those of management. It may be held that such a method would increase controversy. On the other hand, where controversy exists anyway, a clear statement of the views of both sides may enable the area of disagreement to be narrowed.

Damaging findings have also resulted from research into the functioning of works committees. A United Kingdom study concluded that the system of joint consultation in Britain in general neither evoked an interested reaction from employees nor led to increased production.[2] Another study also showed that, where the management's leadership is paternal, employees tend to be concerned mainly with what they can get out of joint consultation. In such circumstances joint consultation has had little influence on established relationships. In fact, it might do possible harm in weakening the line relationship—through its adverse effect on the foreman's position and status.[3]

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[1] *Ingenieurs-conseils en organisation.* Rapport de la mission française de productivité aux Etats-Unis (Paris, Société auxiliaire pour la diffusion des éditions de productivité, 1955).

[2] W. H. Scott: *Industrial Democracy* (Liverpool, University Press, 1955).

[3] National Institute of Industrial Psychology: *Joint Consultation in British Industry* (London, Staples, 1952).

A study by Dahlström of joint consultative committees in the United Kingdom, United States and Scandinavia [1] found that management information-giving dominated works council meetings and took the major time. The discussion of issues was usually limited to proposals and general points of view and real problem-solving activities were extremely rare. Workers' representatives were not technically competent to discuss problems in detail and management was anxious not to commit itself to any joint recommendations. Barriers of language and knowledge existed between workers' representatives and management on technical, economic and organisational matters. Tactical methods derived from the bargaining relationship were brought over into the works council. Members of middle management were put into an awkward position in relation to their colleagues and superiors when their departments were criticised. Lastly, there seemed to be little communication between works committee representatives and those they represented. In fact the average worker did not appear to seek information and, in actual practice, knew very little about what was going on in the organisation. However, workers did want to know about matters directly affecting themselves, e.g. about production orders and employment in their own department, and were particularly anxious to be informed about changes affecting their own working conditions. Some of the reasons put forward for the workers' apathy have been mentioned in the first part of this article. The study also noted that the foreman, contrary to the theoretical structure conceived in the organisational chart, did not function as the main transmitter to the worker of information, which travelled rather in a horizontal manner through various key persons in the work environment. Generalising from these findings Dahlström noted that, while the management tends to concentrate on furnishing more information and presenting it in a better way, on the assumption that in so doing the worker will have a more positive understanding of its attitudes and greater satisfaction in his work, in fact it is the receipt of information that is the most crucial factor and this depends on the attitudes of the workers, which in turn are influenced by his position and role in the organisation and by his group affiliations.

Various aspects of these findings have been confirmed by other observers.[2]

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[1] Edmund DAHLSTRÖM: *Internal Communication* (Stockholm, Industrial Council for Social and Economic Studies, 1956).

[2] See, for example, R. MOREAU: "A Short Report on the Problems of Information and Consultation of the Workers", in *Human Relations in Industry*, Rome Conference, January-February 1956. European Productivity Agency (Paris, 1956).

Such findings are a rather damaging indictment of existing methods of employer-employee communications. However, there are examples of undertakings where communication between management and men seems to have been very successful, under certain circumstances.

To cite one instance, the Fawley refinery of the Esso Petroleum Company in the United Kingdom was completed considerably earlier than projected and an inquiry was conducted by the British Institute of Management to discover why.[1] Among the specific management practices which contributed to the speedy construction of the refinery were mentioned *(a)* the system of line communications which ensured that all in authority were informed of everything affecting the job, and *(b)* the setting up of a site executive committee of shop stewards and management representatives to settle problems of site working conditions. Line communications were highly organised through a series of regular reports, bulletins and meetings, and yet they operated in a very informal atmosphere. Two groups which played a vital part in the system were the members of top management and the supervisors, who were easily accessible, the latter being constantly on the site.

Measures were taken to ensure that supervisors had knowledge of everything affecting their work, such as managerial decisions, arrival of drawings and labour negotiations, on the principle that each individual should be kept up to date both on the factors directly affecting his immediate responsibility and on the job as a whole. The investigators also commented on the personal qualities of the supervisors, who were specially selected not only for their technical ability but also for their character, leadership and capacity to mix. The men who worked under them felt that they were treated as equals. Many of the men commented on the fact that the supervisors kept the same hours as they themselves did. There was also a wide dissemination of information to the workers.

Another factor that contributed to the excellence of the communication system was the site executive committee, which met weekly in the firm's time. It consisted of a representative of each union on the site and management representatives, the chairman being alternately drawn from each group. It provided an opportunity for the discussion of issues raised by workers and for the management to explain issues over which there had been or might be difficulty or resentment.

In conclusion, it seems incontestable that where industrial relations are bad in the undertaking, communications between

[1] See A. P. GRAY and Mark ABRAMS : *Construction of the Esso Refinery, Fawley* (London, British Institute of Management, 1954).

management and employers cannot be effective, and much of what the management tries to convey to workers will be regarded as propaganda or an attempt to win the workers' loyalty away from their unions. This attitude of suspicion, even where industrial relations are good, may be present to a certain degree in view of the resources at the disposal of employers for presenting their information compared to those available to trade unions. Therefore it appears that communication through the union or works council is one of the best ways, because the workers' own representatives are involved and information coming through this channel is more likely to be accepted by employees. A further problem seems to be that of reception of information by the workers, which depends to a considerable extent on their attitudes. Workers are affected by the way managements (particularly supervisors) play their authoritative role in the enterprise. Thus concern concentrates on the persons who communicate rather than on techniques. " The problem of industrial communications therefore boils down in the last analysis to the entrusting of authority to those who are selected as being capable of exercising it without damage to themselves or others."[1]

These observations are based on researches carried out in countries having a long history of industrialisation. In the numerous less industrialised or more recently industrialised countries where the oil industry operates, the barriers to achievement of effective communications, as mentioned earlier, are more formidable than in the highly developed ones. Very little research has been done into the efficiency of management-worker communication systems in these countries, but here one of the significant contrasts with the petroleum industry in the highly industrialised countries is the lack of information passed to the worker. In a number of cases attempts to establish communications through such media as joint consultation or suggestion schemes have failed, and in others no attempt has been made. There are present in such countries deep-rooted difficulties such as the workers' suspicion of management motives, their lack of knowledge and understanding, and the management's authoritarian attitude and disinclination to pass on information. Nevertheless, the key aspects mentioned above on which effective communications depend are likely to apply here too—the development of good relations between management and workers' representatives and the management's efforts in developing a consultative rather than an authoritarian atmosphere in the undertaking.

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[1] T. S. SIMEY : " Problems of Communication in Modern Industry ", in *Human Relations in Industry*, op. cit.

REPORTS AND INQUIRIES

Technical Progress and the Employment and Training of the Young

It is a commonplace that technical progress is transforming the employment and occupational patterns of the industrialised countries. This phenomenon, as it gathers speed, affects all sections of the economy and makes it very difficult to strike a balance in manpower supply and demand. In following their full employment policies, governments therefore need more than ever to be able to base their decisions on accurate information about the economy's present and future needs. Because of the post-war birth-rate "bulge" they can rely on an adequate supply of young workers in the years ahead [1]*, but even so local shortages in some industries or areas, combined with pockets of unemployment in others, may occur unless plans are made now to deploy the young labour force along the right lines.*

This article sets out to show how the pattern of demand when these young workers come on to the employment market will have changed under the impact of technical progress. It goes on to describe what the industrialised countries are now doing to cope with their current needs and to relate the education and training of young people to their foreseeable future requirements.

Occupational Changes

The emergence of new industries, the introduction of new materials and processes and all the innovations that have accompanied them have accentuated specialisation at all levels of skill.[2] In industry the general labourer, relying on muscle power, is losing ground while the semi-skilled, whose work does not require a proper apprenticeship but simply a certain amount of learning on the job, which may take anything from a few days to several months, are now found in large numbers in the mass-production industries. At the most advanced stages of mechanisa-

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[1] On this subject see "The Influx of Young People into the Employment Market in Western and Northern Europe", in *International Labour Review*, Vol. LXXV, No. 4, Apr. 1957, pp. 335-353; O.E.E.C., Manpower Committee: *Employment Problems of Young Workers*, Document MO(57)15, Scale 2 (mimeographed) (Paris, 13 Aug. 1957); Economic Commission for Europe: *Economic Survey of Europe in 1957* (Geneva, 1958), Chapter VII, pp. 1-10.

[2] For an inquiry into the broad trend in the distribution of the world's working population see *International Labour Review*, Vol. LXXIII, No. 5, May 1956, pp. 501-521 and Vol. LXXIV, No. 2, Aug. 1956, pp. 174-192. See also ibid., Vol. LXXII, No. 6, Dec. 1955, pp. 467-495 ("Automation—Some Social Aspects"); Vol. LXXIV, No. 4, Oct. 1956, pp. 384-404 ("Automation: A Brief Survey of Recent Developments"); Vol. LXXXI, No. 2, Feb. 1960, pp. 154-173, No. 3, Mar. 1960, pp. 255-273 and No. 4, Apr. 1960, pp. 350-369 ("Effects of Mechanisation and Automation in Offices").

tion, however, the skills in greatest demand tend more and more to have one factor in common—supervision tends to take the place of direct handling, while manual dexterity and " know how " tend to be replaced by understanding of the installation or equipment. In other words, skill tends to entail fewer " motor " or " manual " aspects and more mental aspects involving perception and knowledge, i.e. the ability to absorb information and to relate or interpret it as a prelude to taking action.

Some skilled jobs requiring a full-scale apprenticeship are also disappearing and their places are being taken by repetitive machine work, while other skilled trades are coming into existence. Although it is difficult to find out the exact figures, the proportion of skilled workers in the total labour force is, broadly speaking, fairly stable. It is hard to say whether within this category the number of highly skilled workers is tending to rise, because not enough statistics on the subject are available.

Among the skilled workers in greatest demand as mechanisation progresses are the maintenance men, who require an increasingly broad training. For example, in the maintenance of automatic metal-working machines, a traditional familiarity with machinery and tools is no longer enough and a grasp of precision engineering, hydraulics and kinematics is also necessary. In the chemical industry, mechanics in control jobs must have experience in flow processes as well as a sound knowledge of precision engineering, electricity and electronics. In almost every plant the repair shop mechanics are expected to have adequate experience in precision and electrical engineering and some idea of electronics. As these qualifications differ very little from those of the technicians, but are acquired by serving an apprenticeship, these new mechanics have been described as " apprenticed technicians ". One particular form of preventive maintenance which is growing rapidly because of the importance of instrumentation in automated processes requires workers specialising in precision, control or regulating instruments.

" Indirect " labour is generally tending to increase while direct production labour is tending to decline owing to the greater emphasis on such matters as the design of new products or models, better production organisation, more accurate costing, and job study.

One class of worker is coming to play a key part in industry ; this is the " technician " specialising in research, design, manufacture, electronics, operational research, laboratory work, and so forth.

Generally speaking, technical, scientific and managerial staffs are growing in number, especially in the new, rapidly expanding industries.

The standard of knowledge required of engineers is broadening and deepening at the same time. Engineers now need to have a good grounding in production economics and organisation. Automatic processes call for engineers with a variety of technical backgrounds. Human relations are also coming to the fore as engineers tend to work more and more in teams. The distinction between technical and managerial skills is becoming blurred as mechanisation progresses and technical staffs take over more managerial functions. One particular group—the technical supervisors—plays a vitally important part as a link between the workers and managements, and its importance is steadily growing as the drive for efficiency gathers way. The job of these supervisors is technical and organisational, but it also has a human side to it. Above them, the managerial staffs also need a technical background, because their decisions involve complex, expensive plant and the modern planning and management control methods they are obliged to use also entail special training.

Technical progress in the shape of mechanisation and automation has brought about large-scale changes in office work as well. Many junior posts have been created and only a handful of supervisors are now needed to do the planning and control operations. Nowadays in large mechanised offices the intermediate posts have disappeared, and the jobs which used to be performed by specialised clerks are done by machines, i.e. there is an increasingly sharp dividing line between managerial functions discharged by supervisors and the routine jobs performed by the machine operators. The junior posts are filled by unskilled workers who are given a brief period of training, while a small number of new and more technical jobs requiring special training have also come into existence.

This whole trend is leading to a far-reaching change in the pattern of occupations. Some tend to disappear while new ones emerge or others expand.[1]

Future Prospects

The magnitude of these occupational shifts makes it exceptionally important to be able to forecast future developments. The value of forecasts is enhanced by the fact that it takes time to create training facilities to meet the needs of a modern economy, and the higher standard of qualifications required also lengthens the training period.

The practice of making manpower forecasts is gradually spreading in the industrial countries, but the fact is that they are very difficult to make, and although methods are constantly being improved, e.g. by taking into account such factors as the rate of economic growth and of increases in productivity, the results are no more than a pointer to the likely general trend. Moreover, there are very few countries which make detailed forecasts of employment in each occupation, although this is absolutely essential for the vocational training and guidance of the younger generation. Under the pressure of necessity several countries have recently tried to compute their need for technical and scientific staff [2] because of the serious shortage in all the industrial countries, but these attempts at forecasting have not usually been extended to other classes of workers.

As the United States is one of the few countries to make detailed occupational forecasts for each branch of employment, we can take as an example the forecasts for the years 1960-70 in the latest edition of the *Occupational Outlook Handbook* published by the United States Department of Labour to illustrate the general trend of future development. This handbook forecasts: a continuing sharp rise in " white collar " employment, especially in the professions (for every 100 professional or technical workers in 1960, about 143 will be needed in 1970); a fairly rapid expansion in employment in offices, shops and services (for every 100 of these workers in 1960, about 127 will be needed in 1970); a slightly less rapid expansion in the number of skilled workers (for every 100 of these in 1960, 124 will be wanted in 1970); a somewhat slower increase

[1] In the United States from 1949 to 1955, 2,260 new or revised job definitions were included in the *Dictionary of Occupational Titles*; the 1957 Supplement to the *Dictionary* contains descriptions of some 600 forms of employment for technicians in the physical and applied sciences (see *Employment Security Review* (Washington, D.C.), Vol. 24, No. 12, Dec. 1957, pp. 27 and 39).

[2] On this subject see " Technical and Scientific Personnel; Methods of Assessing Supply and Demand ", in *International Labour Review*, Vol. LXXXI, No. 1, Jan. 1960, pp. 58-73.

in the number of semi-skilled workers (for every 100 in 1960, about 118 will be needed in 1970) ; little, if any, change in the number of jobs for unskilled workers ; and a steady fall in the number of farm workers (for every 100 workers in this occupation in 1960, only 83 will be needed in 1970). As regards individual occupations, the handbook gives information for the first time about jobs connected with missiles and the conquest of space, programming the " instructions " for electronic computers, and the employment of technicians who work in close co-operation with scientists and engineers.

Further sifting of this information shows that—

(a) the number of engineers will continue to increase sharply in the aeronautical, electrical and engineering industries owing to the expansion of industry, the growing complexity of industrial techniques, the heavy expenditure on research and its applications, and the maintenance of national defence expenditure at a high level ;

(b) the number of scientific posts will also increase, since new scientific discoveries can be expected in almost every field ; more scientists will be needed to teach, carry on fundamental research and apply scientific knowledge in such fields as electronics, nuclear energy, and medical and space research ; mathematicians and physicians will be in relatively greater demand than for example meteorologists, biologists and geologists ;

(c) in the professions, doctors, dentists, nursing staff, teachers and school counsellors will be in particular demand ;

(d) the number of jobs for skilled workers will increase most in motor-car maintenance, the repair of industrial and office machinery, and building ; despite the substantial increase anticipated in the demand for engineers, it will be necessary over the next ten years to train three times as many skilled building workers as engineers and three motor mechanics for every chemist ;

(e) many new jobs will become available in offices, mainly because of the very heavy turnover ; the automation of office work will curtail the demand for certain classes of employees, but the total volume of employment will probably increase, although more slowly than between 1950 and 1960 ; workers whose jobs call for a good deal of judgment or involve contact with the public, e.g. secretaries, receptionists, employees of complaints departments, etc., will be less affected by this trend. Generally speaking the standard of qualifications required is on the upgrade.[1]

The conclusion that can be drawn from these forecasts—which are of course only valid in detail for the country that made them—is that in the near future the range of opportunity will probably go on widening and diversifying, and that as technical progress develops and spreads the number of skilled workers will increase. Some argue, however, that automation could have quite a different effect, and special consideration must therefore be given here to its impact.

Probable Consequences of Automation

In the countries with planned economies where large-scale automation is being introduced, there is optimism about the consequences. Two Soviet experts wrote in 1958—

[1] " Employment Prospects for Youth in the 1960s ", in *Industrial Arts and Vocational Education* (Milwaukee, Wis.), Vol. 49, No. 2, Feb. 1960, pp. 52-53.

The automation of production processes will require not less skilled workers but on the contrary, in the majority of cases, more skilled ones, especially when the degree of automation is high.... In a Socialist economy, where both unemployment and overproduction are unknown, automation helps to create conditions such that the cultural and technical level of the workers can gradually be raised to that of technicians and engineers.[1]

In Western Europe and North America, on the other hand, the effect of automation on levels of skill has stirred up a good deal of controversy. The impact of this particular form of technical progress has in fact been explored in these countries more widely than that of other forms of technological development, but only on the basis of case studies from which it is hard to draw any general conclusions.

Writers are widely agreed that increasing numbers of specialists, technicians, engineers and indirect workers generally will be needed, but views differ as to the outlook for the skills of workers directly engaged in production.

Those who argue that the standard of skill will become even higher, base their contention on the fact that greater demands will be made on the personnel operating the machines (e.g. supervision, the need to exercise judgment, generally heavier responsibilities, etc.), plus the fact that the number of maintenance jobs expands as the number of direct production jobs falls.[2]

The man in charge of an automatic process requires a skill which, though it may not be obvious at first sight, is a real one nevertheless. It involves the ability to spot and identify the signals of all kinds being given by the machine, the ability to anticipate what will happen in a given set of circumstances, and the knack of choosing the best way of achieving the desired result.[3]

It is also argued that automation will have less impact on the skills required of maintenance workers than on those of some operatives. However, the maintenance workers themselves will need a broader and more thorough training. A distinction should be drawn between routine maintenance workers, who are akin to semi-skilled workers in non-automated industries, and those who are responsible for urgent repairs or are called in when there is a breakdown. Because of the complexity of servo-mechanisms (which may be mechanical, electrical, electronic, pneumatic or hydraulic) the second group have to be exceptionally skilled and versatile.

But other experts have come to quite different conclusions. They argue that by and large automation probably means that a high degree of skill and training will be less essential for the average worker. As processes become more automatic, the standard of skill required of operatives first rises and then falls. Obviously there will be many exceptions in which the knowledge, sense of responsibility and concentration required will be greater, but broadly speaking the most advanced forms of mechanism will sooner or later restrict the operative's

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[1] K. KLIMENKO and M. RAKOVSKY: "The Technological and Economic Problems of Automation in the U.S.S.R.", in *International Social Science Bulletin* (Paris, U.N.E.S.C.O.), Vol. X, No. 1, 1958, p. 52.

[2] O.E.E.C., European Productivity Agency: *Vocational Training in View of Technological Change* (E.P.A. Project No. 418). Report by S. D. M. KING (Paris, Mar. 1960).

[3] E. R. F. W. CROSSMAN defines this as a "specific control skill". See Reading University, Department of Scientific and Industrial Research: *Automation Skills* (Sep. 1959) (mimeographed), p. 6.

control over his machine.[1] As for maintenance personnel, there appear to be just as many cases where the requirements are less than, or the same as, before automation and in fact only some grades of maintenance workers will need training in electronics. In short, according to this school of thought, it is by no means certain that automation will raise the general level of skills by creating new jobs for specialists or by increasing the percentage of maintenance workers required. On the contrary automation may help to overcome many shortages of skilled workers; and, while the development of technology does create thousands of new jobs for specialists, the automatic machinery can largely be tended by ordinary workers.[2]

Plainly automation is only one of the factors that will affect the level of skill required of workers in the future. In automated plants the relative importance of the impact of automation on the level of skill will depend on the proportion of workers in the total labour force affected by any rise or fall in the qualifications required. A fall in these qualifications among operatives—and the controversy is mainly over the effect on the direct labour force—will have less effect if the proportion of direct workers concerned happens to decline. On this point there are completely contradictory arguments based on equally significant evidence drawn from different case studies.

The speed with which automation spreads through industry will also be decisive. So far it has not been introduced in every industry or indeed in every plant in given industries. Some, especially those in which production can be reduced to a continuous process, are already highly automated while others are only partly automated and yet others are virtually unaffected and may remain so for some time to come.

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Whatever the long-term trends in standards of skill as a result of automation, the younger generation is urgently faced in any case with the tremendous task of acquiring wider and more advanced qualifications. With this equipment it should be better fitted to cope with the hazards of the future. Employment opportunities will depend on a number of factors such as the speed of technical progress in its various forms, the rate of economic growth and the trend in hours of work and retirement ages. Is it possible to come to any conclusions about the possibility of expanding employment in the light of the general growth in the supply of labour and especially of young workers ?

The Volume of Employment

The recent employment trend in the industrial countries appears to show that the demand for manpower is more than adequate to absorb all the workers. Countries with rapidly growing economies like the Federal Republic of Germany and the U.S.S.R. are even suffering from a widespread labour shortage. In industrial countries with some slack in their employment position, such as Belgium and France, and even those with extensive unemployment such as the United States there are nevertheless shortages in many trades and occupations that have come into being or expanded as a result of technical and scientific progress.

[1] James R. Bright : *Automation and Management* (Boston, Mass., Harvard University, Division of Research, Graduate School of Business Administration, 1958), p. 187.

[2] Ibid., pp. 195-197.

At the present time there is a shortage—sometimes acute—of young workers in all the industrial countries, but as can be seen from the preceding pages the demand is not from every occupation, and young people will have the best chance of finding work in skilled trades and jobs requiring technical and scientific knowledge. This has been emphasised by prominent persons in a number of countries. In the United States, for example, the Secretary for Labour, Mr. James Mitchell, said at the end of 1957—

> By 1965 the gross national product must increase by 40 per cent.... To achieve such an increase in goods and services we will need 10 million additional workers. Merely getting that many workers will not be difficult. They will come to us as a natural result of population growth. But finding workers with the necessary skills to man industry, which daily becomes more specialised and complex, won't be such an easy matter. In fact, we will not " find " them at all. We will have to " make " them through training and education and foresight and planning.[1]

Similarly in France the Chairman of the French Federation of Engineering and Metal Working Industries stated at a conference organised by the European Institute for Vocational Training in 1959 on the subject of young people already in industry or being trained for it—

> We are concerned not so much over our inability to find work for these young people as over the difficulty of training them quickly enough for the skilled jobs they will be required to perform.[2]

In the United Kingdom a subcommittee of the National Joint Advisory Council set up in 1956 to study the training of young workers emphasised in its report (the Carr Report)—

> But, for the country as a whole, the problem presented by the "bulge" is not one of employment. It is how to ensure that the facilities for training over the next few years are adequate, both in numbers and in quality, to take advantage of the extra number of young people who will be entering employment during this period.[3]

Lastly, in the U.S.S.R. the Central Committee of the Communist Party emphasised in 1958—

> Particular importance attaches to the vocational and technical training of youth.... The expansion of production is already being hampered in some cases by the inadequate standards of skill of a part of the labour force.[4]

Lack of the right skill may, however, lead to a certain amount of temporary unemployment among young people; but the position will depend on the circumstances in each country. In France, for example, when the relatively large numbers of young people born in 1945-46 started to enter the employment market it was found that, contrary

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[1] *Employment Security Review*, Vol. 24, No. 12, Dec. 1957, p. 3.

[2] F. PEUGEOT : " Les préoccupations des milieux employeurs quant aux conséquences, en matière de main-d'œuvre et de formation professionnelle, de l'instauration de la C.E.E. ", in *La formation professionnelle dans le Marché commun* (Paris, Feb. 1959) (mimeographed), p. 13.

[3] *Training for Skill—Recruitment and Training of Young Workers in Industry*, Report by a Subcommittee of the National Joint Advisory Council (London, H.M. Stationery Office, 1958), p. 3.

[4] *Pravda* (Moscow), 47th year, No. 320, 16 Nov. 1958, p. 2.

to previous experience, there was a fall in the number of job applicants of all ages between 1 October 1959 and 1 October 1960 but an increase in the number of unsatisfied applications from young people under the age of 18. Moreover, during this same period the number of vacancies rose by 36 per cent. for workers of all ages and by only 7 per cent. for young people under the age of 18.[1] In Belgium, on the other hand, between 16 May 1959 and 16 May 1960 the fall in total unemployment due to economic expansion was extremely sharp in the case of young people under 20 years of age—73 per cent. as against 42 per cent. for men aged between 20 and 35 and 26 per cent. for those aged between 35 and 50.[2] Here, as in many other countries, it is reported that young workers have a better chance of finding jobs than the older ones because they take more easily to modern forms of mechanisation. In fact many employers refuse to take workers over a certain age. In Great Britain the percentage of young people under the age of 18 compared with the number of totally unemployed persons was 8.7 in September 1960, as against 9.2 a year previously and 7.9 in September 1958.[3] This trend is of course largely due to fluctuations in the number of school-leavers each year, which was higher in 1959 than in 1958 and lower in 1960 than in 1959.

In the United States unemployment is particularly acute among young people. In October 1960 the over-all rate of unemployment was 5 per cent., while in the 14 to 19 age group it was 12.3 per cent. for males and 11.2 per cent. for females and in the 20 to 24 age group the figures were 7.1 and 7 per cent. respectively. Not only were these rates markedly higher than for other age groups but they were also higher than the year before in the case of males between the ages of 20 and 24 and females between the ages of 14 and 19. A sample survey in October 1959 showed that one out of four of young people who had not graduated from high-school was unemployed as compared with one out of eight of those who had done so.[4] Nevertheless, the number of young people not graduating will remain high for the next ten years. It is anticipated that, despite the rise in educational standards, more than 7.5 million young people will enter the labour market between 1960 and 1970 without having graduated from high-school and that a third of them will stop at the eighth grade. This state of affairs is considered extremely unfortunate at a time when it is expected that a growing number of occupations will need workers with at least a high-school diploma.

It would be useful to have similar figures for other countries where there is some unemployment among young people to illustrate any difficulties in the way of those who have not been properly trained as compared with those who have. A breakdown of the length of unemployment of young people according to their degree of skill would also be valuable. In any event the figures quoted for the United States do show the link between juvenile unemployment and the absence of vocational training suited to the needs of a modern economy.

[1] *Statistiques du travail et de la sécurité sociale* (Paris, Ministère du Travail), Oct. 1960, p. 35.

[2] Ministère du Travail, Office national du placement et du chômage : *Recensement semestriel des chômeurs complets au 16.5.1960* (Brussels, Aug. 1960), p. 7.

[3] Taken from statistics published in the *Ministry of Labour Gazette* (London), Vol. LXVIII, No. 10, Oct. 1960, p. 408 ; Vol. LXVII, No. 10, Oct. 1959, p. 372 ; and Vol. LXVI, No. 10, Oct. 1958, p. 384.

[4] *Monthly Labor Review* (Washington, D.C.), Vol. 33, No. 5, May 1960, p. 504.

Obstacles to Flexibility in the Training of the Young

There are a number of factors which make it difficult for young people to keep up with changes in employment in the industrial countries.[1]

It is true that they are increasingly tending to go in for scientific or technical occupations. For example in the United States, during the past eight years, the number of school pupils has increased by 29 per cent., but the number of those taking science has risen by 38 per cent. and of those taking mathematics by 49 per cent. In France, out of every 100 candidates taking the second part of the *baccalauréat*, 56 took the course in philosophical subjects in 1948, whereas by 1960 there were only 44; this fall is offset by the rise in the number taking experimental sciences (from 21 to 27 per cent. between 1950 and 1960), mathematics, and mathematics and technical subjects (up from 26 to 29 per cent. between 1950 and 1960).[2] In the Netherlands in 1930, out of the total number of elementary-school leavers, 6 per cent. went on to a secondary school, 19 per cent. to a senior elementary school, and 13 per cent. to a technical school (total 38 per cent.); in 1956 these percentages were respectively 14, 34 and 36 (total 84 per cent.).[3] In the United Kingdom the number of students taking the General Certificate of Education (advanced level) between 1951 and 1957 rose by 76 per cent. in the case of mathematics, 58 per cent. in the case of physics, and 45 per cent. in the case of chemistry, while at the ordinary level (after which many boys go on to the technical schools) the number of candidates rose by 57, 107 and 93 per cent. respectively. In Sweden the number of students entering the science faculties increased from 386 in 1950 to 616 in 1956.

Even so, these figures are only a rough guide to the position, because in many countries the number of entrants is limited by the shortage of premises and teaching staff. To quote only a few examples, in the Federal Republic of Germany, where young people show a keen interest in technical professions, 20 engineering schools turned down over 4,000 applicants in 1955, while in the following year 14 of the schools turned down 3,300.[4] In France 50 per cent. of the persons applying for places in the apprenticeship centres in 1960 had to be turned away because of lack of space.[5] In Poland there were twice as many would-be scientific or technical students as there were vacancies. In Sweden also there are more pupils wishing to study scientific and technical subjects than can be accommodated.

A further point is that young people entering the scientific faculties do not necessarily take the subjects which are of most value to industry ; for example in France, where industry is crying out for physicists and to

[1] Most of the figures and information reproduced below are taken from the following sources : U.N.E.S.C.O. and the International Bureau of Education : *Training of Technical and Scientific Staff—Measures to Increase Facilities*, XXIInd International Conference on Public Education, Geneva, 1959, publication No. 205, and the *International Year Book of Education* (Geneva), Vols. XVII-XXI, 1955-59, publications Nos. 168, 179, 189, 201 and 211.

[2] *Avenirs* (Paris, Bureau universitaire de statistiques et de documentation scolaires et professionnelles), No. 112, June 1960, p. 6.

[3] O.E.E.C. : *Training of Scientists, Engineers and Technicians in the Netherlands* (Paris, 1959), p. 15.

[4] Idem : *Training of Scientists, Engineers and Technicians in the Federal Republic of Germany* (Paris, 1959), p. 11.

[5] *Le Monde* (Paris), 18 Nov. 1960, p. 11.

a smaller extent for mathematics graduates, the sharpest increase has occurred in the number of students taking the natural sciences.

The position is equally unsatisfactory in other respects. Some young people undoubtedly fight shy of a technical education because it is difficult to go on from there to an advanced institution, which is the aim of the great majority. Nevertheless there can be no doubt that the jobs of many technicians and junior supervisors, especially when they involve the latest techniques, are extremely interesting and much better paid than the careers open to many university graduates. But young people in general are given poor guidance. For example it was lately found in Belgium that in ten years the number of pupils taking advanced and intermediate textile courses had fallen by 38 per cent. despite the good prospects in the industry.[1] In France it was recently reported that vocational training is not always carefully tailored to the needs of each occupation. For example 6,600 apprentices completed their training in 1960 as building electricians, whereas there was estimated to be a need for only 1,900.[2]

Parents' influence is usually in favour of the white-collar occupations, which retain much of their attraction because of the tendency to look down on manual jobs. An investigation in Los Angeles, in which people were asked which occupations they would like their children to enter, yielded the following results: where 20 per cent. of the people in the area were in the professions, 30 per cent. in business and 50 per cent. in industry, 60 per cent. of the parents wanted their children to enter the professions, 20 per cent. to enter business, and only 7 per cent. preferred technical and mechanical pursuits.[3] In the U.S.S.R. Mr. N. Khrushchev in 1958 denounced " family attitudes which smack of an aristocratic contempt for physical labour ".[4]

In addition, the variety of new occupations is so great that one person's experience is no longer sufficient, and parents are unable to give their children proper guidance. Young people are usually aware of only a limited number of occupations. For example in France 2,035 boys questioned during a survey mentioned only 163 occupations in their preferences, while 1,625 girls mentioned an even smaller number (121).[5]

A survey of pupils aged between 11 and 14 in the schools of Leningrad showed that 70 occupations or trades were mentioned. The boys were keen on technical and military occupations (82.8 per cent. of the number mentioned); they particularly wanted to be pilots, engineers, seamen, and radio telegraphists. The girls were mainly interested in the sciences or occupations for which an arts course formed a suitable preparation (59 per cent.), e.g. medicine, teaching, the arts, and geology. Among the manual trades, fitting, carpentry, and tailoring, were the most frequently mentioned.[6]

Generally speaking, few young people feel a real calling. The great bulk of them have likes or dislikes for some trades or occupations. An

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[1] *Bulletin d'information et de documentation* (Brussels, Conseil central de l'économie et Conseils professionnels), No. 17, June 1960, p. 32.

[2] *Statistiques du travail et de la sécurité sociale*, Aug. 1960, p. 59.

[3] *School Shop* (Ann Arbor, Michigan), Vol. XIX, No. 4, Dec. 1959, p. 9.

[4] *Pravda*, 47th year, No. 264, 21 Sep. 1958, p. 2.

[5] Suzanne CORDELIER: *Les adolescents face à leur avenir. Etude sur les raisons de leur choix professionnel* (Paris, Les édition sociales françaises, 1957), p. 27.

[6] O. I. GALKINA, Z. M. ZIUBIN, and V. V. CHEBYSHEVA in *Sovietskaya Pedagogica* (Moscow), Feb. 1960, p. 66.

inquiry carried out in Sweden has shown that as they get older their dislikes get stronger but their preferences become weaker.[1] Guidance experts are unanimous about the emotional factors underlying children's choice of careers—as often as not they have no idea what conditions are actually like in these occupations. The Soviet pupils who were questioned were mainly attracted by the romantic aspect of certain occupations, and referred chiefly to the personal qualifications required in them. The French pupils who were swayed by conditions in the occupations chosen (15 per cent. of those questioned) made points such as being able to work at home, the fact that the job was light, quiet, varied or lively, the need to be smartly dressed, etc. ; only 0.44 per cent. of the replies showed evidence of a real vocation.

Young people often choose their careers under completely arbitrary and haphazard influences. In France 17 per cent. of students stated in 1958 that they had been strongly influenced by their parents, and 28 per cent. that they had been influenced to some extent.[2] In the U.S.S.R. the influence of parents was fairly slight among the pupils covered by the survey just referred to—65 per cent. of them were guided in their choice by their reading, radio or television programmes, or films that they had seen ; 9 per cent. as a result of their studies at school or their work in factories, 6 per cent. by their contacts in clubs, while the remainder were guided by the opinions of their parents or friends or by other factors.[3] An inquiry in the United States among pupils taking vocational training courses showed that the influence of friends and parents and of vocational guidance experts or alternatively mere chance, had predominated in their choice. The influence of friends was by far the strongest, but fathers, mothers, cousins, uncles, and other relations also counted a good deal whenever they had done well in their own occupations.[4]

Apart from this apparent vagueness among young people about the changes caused by technical progress in industry, there are a number of other factors which can hamper or prevent flexibility in training by preventing young people from acquiring the range of knowledge needed by modern industry. Reference was made earlier to shortages of premises and staff in many countries, which curtail training opportunities for occupations in heavy demand. On top of this there are a number of financial, geographical, and other difficulties.

For example in the United States it is estimated that a third of the pupils in the top 25 per cent. of high-school graduates do not continue their studies beyond the secondary stage mainly for financial reasons. The Princeton Educational Testing Service stated in 1955—

> The fact that a very large number (four-fifths) of able students without college plans would be willing to go to college if given a scholarship surely indicates that many students do not have college plans simply because they have never been able to view college as being a reasonable prospect.... Given a way to pay their expenses their plans apparently would readily change ; given the assurance early in their school career that college is financially attainable, they might include in their courses the sciences, mathematics, and English needed to make it a reality....[5]

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[1] " Redogörelse för försöksverksamhet med enhetsskola, Redovisningsåret 1956/57 ", in *Aktuellt från Skolöverstyrelsen*, 11th year, Mar. 1958, p. 42.

[2] *Informations universitaires et professionnelles internationales* (Paris, Association internationale d'information scolaire universitaire et professionnelle), No. 9, p. 2.

[3] *Sovietskaya Pedagogica*, loc. cit.

[4] *School Shop*, Vol. XIX, No. 8, Apr. 1960, p. 26.

[5] *Employment Security Review*, Vol. 25, No. 4, Apr. 1958, p. 2.

In France, the Armand-Rueff Committee set up to examine the *de facto* and *de jure* obstacles to economic expansion, stated in its report to the Government in 1960 : " Opportunities of secondary and advanced education for children from working-class or rural homes should be expanded." [1] In the United Kingdom a 1956 report on technical education deplored the wastage among many pupils capable of benefiting by a secondary education.[2] In many courses for technicians and skilled workers only a quarter of those who started in 1956 stayed until the final examination. Most of them left at about the age of 16 for various reasons, e.g. the need to work overtime, shift work, being away on a job, travelling difficulties, ill health, a decision to take evening classes, etc.[3]

Geographical factors also limit young people's chances of acquiring a skill or finding jobs, even though they are relatively more mobile than adults. Rural areas and small towns labour under a great handicap in this respect. In the countryside the position is made worse by the fact that there is usually a population surplus, and young people should be trained for jobs other than farming. This disparity in the levels of skill caused by differences in the availability of training facilities is particularly unfortunate at a time when technical progress requires a general raising of qualifications. On this point it is worth quoting a passage in a report published by the United Kingdom Minister of Education in 1958—

> The fact is that there are, today, too many children of approximately equal ability who are receiving their secondary education in schools that differ widely both in quality, and in the range of courses they are able to provide.... There are still too many areas in which it has not yet been possible to give the secondary schools, and in particular the secondary modern schools, the resources they need.... [Great Britain] cannot afford to waste any potential source of skilled manpower. We need not only first class scientists and technologists but also an ample supply of technicians and craftsmen. And we cannot hope to obtain the objectives laid down . . . unless all our secondary schools, including the secondary modern schools, make their full contribution.[4]

The discrepancies between supply and demand as a result of this inability of the younger generation to keep up with the changes in occupational patterns has been a source of concern to governments for some years past. The necessity for urgent action to set the situation right has now become acute.[5]

Opportunity for All

That all available talent should be used to the best advantage is not only a matter of justice but has become an increasingly pressing need as technical progress demands higher standards of skill of growing numbers of workers.

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[1] *Documents officiels et Bulletin officiel de l'Education nationale* (Paris), No. 25, 29 Sep. 1960, p. 1.

[2] *Technical Education*, report presented by the Minister of Education and the Secretary of State for Scotland, February 1956 (London, H.M. Stationery Office, 1956), Cmd. 9703, p. 25.

[3] Ibid., p. 20.

[4] *Secondary Education for All—A New Drive*, report presented to Parliament by the Minister of Education, December 1958 (London, H.M. Stationery Office, 1958), Cmnd. 604, pp. 4-5.

[5] On this subject see " Shortage of Highly Qualified Engineers and Scientists ", in *International Labour Review*, Vol. LXXVI, No. 6, Dec. 1957, pp. 588-603.

Efforts to give all young people equal opportunities may take the form of granting financial aid to enable more of them to study, expanding further training facilities for those who have to start work at an early age, making it easier to transfer from one " stream " to another so as to correct any mistakes in guidance, ironing out differences in training facilities available in different areas and in town and country, and providing better guidance for young people.

Financial Aid

Financial aid to enable larger numbers of young people to continue their studies, especially in technical and scientific subjects, may take a variety of forms. Governments are allocating more money for this purpose. For example in the United States expenditure by public universities and university colleges on the training of scientists and engineers is estimated to have increased from some $180 million in 1949-50 to $320 million in 1955-56. In the United Kingdom the Government launched a £100 million programme in 1956 for the expansion of technical colleges. The number and value of scholarships has also been increased. In the U.S.S.R. over 80 per cent. of the students have state scholarships, as have 50 per cent. of the pupils at technical secondary schools and 70 per cent. of the students at advanced institutions in Poland. In France the whole scholarship system was overhauled and made more democratic in 1957. In the Federal Republic of Germany able students at universities and senior technical schools may be granted state scholarships since 1957 if they need financial assistance. In England and Wales the number of new state scholarships for technical and scientific students rose from 1,000 in 1950 to nearly 2,000 in 1957. In the United States scholarships count for less than 5 per cent. of total student income, but growing numbers of students obtain " honour loans " bearing nominal interest.

In addition to this financial assistance there are a number of other facilities, such as cheap fares, housing concessions, etc., which vary in scope from one country to another. Tuition fees are also tending to fall. In the U.S.S.R. education has been free of charge everywhere since 1956, while in the United States the regional vocational training courses are open, free of charge, to all who have the ability to take them.

Study Opportunities for Young Workers

Opportunities for study for those already at work (which benefit large numbers of young people) include evening and correspondence courses.

These are used on a large scale in the U.S.S.R., where they are accompanied by various other special facilities designed to make them more effective, e.g. employers are required to assist young people who are taking the courses, books are supplied free of charge, and time off is granted with pay. Above all, students taking the last year of the correspondence courses with advanced institutions are entitled to a special four-months' holiday with the help of a state scholarship to work for their diploma. In 1956-57, 1.6 million pupils were taking evening or correspondence courses of graduate or technician standard. The 1958 Act to expand the public education system and strengthen the links between the schools and real life stipulated that the new vocational and technical schools should provide both day and evening classes and that

correspondence and evening courses must be the main method of training technicians who already have a special secondary education. The Central Committee of the Communist Party emphasised that the spread of advanced education must largely take the form of correspondence or evening classes.

Other countries also use this method of encouraging young people to improve their technical qualifications. For example in the Federal Republic of Germany a number of engineering schools have for some years past held a five-year evening course leading to the engineer's diploma. A special examination for those who have not actually studied at the engineering schools was introduced in 1958. Apprentices who wish to improve their general or technical knowledge can take supplementary advanced evening courses lasting three or four years to qualify them for the engineering schools.[1]

In the Netherlands there was one technical high-school in 1950 but by 1958 there were three, and five other evening technical schools were in operation.

Young people working in industry can also obtain further training on full or part pay by using the facilities to be found side by side with the traditional education system in some countries, e.g. the " co-operative " education system in the United States, the upgrading courses in France or the " sandwich " courses in Great Britain, in which spells of wage-earning employment alternate with periods of study. Generally, the employer keeps the worker on the pay roll (although his wage may be replaced by a scholarship) and upgrades him as he progresses in his studies. In 1957, 70 per cent. of the pupils at technical and industrial schools in the United States were taking advantage of arrangements of this kind. In Great Britain the number of pupils taking " sandwich " courses rose from 2,300 in 1955-56 to nearly 8,000 three years later.[2] Most of them draw their wages throughout the year, although in fact they are attending school for six months out of the twelve. The practice of day release from industry for study purposes is also spreading ; the number of apprentices taking advantage of this has risen in the United Kingdom from 42,100 in 1938 to 448,500 in 1956-57.

The result of this aid to young people and the greater study opportunities available to young workers, combined with changes in outlook and higher living standards, is that more of the young people who continue their studies after the compulsory school-leaving age now come from the lower income groups. In the United Kingdom, for instance, the range of social classes from which students are drawn is steadily widening. A survey of four very different educational institutions by Political and Economic Planning showed that the proportion of individuals from the bottom of the social scale was greater in 1952-53 than in 1948-49. The bulk of the students at the technical schools nowadays belong to a class which formerly went out to work at the end of its compulsory schooling ; in addition, a greater number of university students now come from the state primary schools. In the United States the statistics show that the pupils in public high-schools are increasingly representative of the population as a whole. In Poland it was found in 1956-57 that, of the first-year students at advanced institutions, 47 per cent. were the sons of

[1] *Training of Scientists, Engineers and Technicians in the Federal Republic of Germany*, op. cit., p. 6.

[2] *Education in 1958*. Report of the Ministry of Education and Statistics for England and Wales (London, H.M. Stationery Office, 1959) Cmnd. 777, p. 58.

intellectuals or self-employed persons (as against 57 per cent. in 1937-38), 31 per cent. were the sons of manual workers (as against 9 per cent.), and 20 per cent. were the sons of peasants (as against 8 per cent.). About the same time (in 1958) the breakdown by social origin of pupils in engineering schools in the Federal Republic of Germany was as follows : 30.5 per cent. were sons of non-wage-earners, 28.5 per cent. were sons of clerical workers, 24 per cent. were sons of civil servants, and 17 per cent. were sons of manual workers.

Opportunities for Transferring

Young people who want to take advanced technical or scientific courses but who start off on the wrong track can, in some countries, take advantage of the facilities for transferring. For example in the Federal Republic of Germany persons outside a technical occupation who seem likely to succeed in it are educated and trained at vocational courses provided and financed by the Federal Placement and Unemployment Insurance Institution in co-operation with the engineering and vocational schools. In Belgium the Government has introduced a lower-level secondary school certificate for pupils who have not had a proper secondary school education. In France exemption from the *baccalauréat* has been granted to young people who have not studied for an advanced education ; special classes are also held to facilitate transfers from general education to technical courses and vice versa.

Standardisation of Facilities

A variety of measures have also been taken to iron out differences in the training facilities available in different parts of the same country and so to fill in some of the gaps which handicap young people, especially in the countryside.

For example in the Federal Republic of Germany the Standing Conference of Ministers of Education has tried to reduce the number of types of school, especially at the secondary level. In areas that are poor or lacking in industry, trial spells of work in industrial firms are organised by the Länder educational authorities in conjunction with the regional chambers of industry and commerce, so that applicants wishing to take a technical course are given the same opportunities anywhere in the country. In the United States there has been a tendency for some years past to merge certain school districts, and the facilities available in these districts are becoming increasingly standardised. Small secondary and, above all, primary schools are also being amalgamated. Moreover, by June 1958 over half the states had set up regional vocational schools to cater for pupils living too far from existing schools.

As far as apprenticeship is concerned, joint schemes have been evolved to cope with the difficulties encountered by small firms in providing satisfactory training out of their limited resources. In the United States, where 98 per cent. of the firms are small or medium sized, community-wide apprenticeship committees have been set up, each of which usually deals with a single trade. There were about 5,000 of these committees by the middle of 1958. In the United Kingdom the Carr Report was followed by the establishment of an Industrial Training Council which is responsible for co-ordinating vocational training in industry ; a number of group apprenticeship systems have been set up in certain parts of the country.

In the U.S.S.R. major changes have been made in the educational system in rural districts. Starting in 1957 a number of secondary schools were opened in such areas. Efforts are being made to improve the training of specialists by removing some of the disparities between one economic region and another and a number of big new advanced educational institutions have been opened in the eastern areas of the Soviet Union. In Czechoslovakia national schools (covering the first five years of the eight-year schools) have been opened up in the mountain districts even in areas where there are fewer than 20 pupils, and the network of intermediate schools has been extended so that all children with few exceptions can attend them.

Guidance for the Young [1]

Every country is making a special effort to give young people better guidance so as to cut wastage to a minimum and arouse their interest in science and technical subjects. A variety of methods are used, e.g. the issue of pamphlets and monographs on individual trades, conditions of entry and opportunities in them, lectures, exhibitions, films, slides, factory tours, spells of work in industry, broadcasts, television programmes, etc.

A distinction should be drawn between vocational guidance and information on careers in general, and special measures to stimulate young people's interest in a particular type of employment. In most countries, although efforts are being made to improve liaison with the employment services so as to give young people a better idea of any surpluses or shortages which may exist, vocational guidance is not designed to steer young people into occupations where there is a labour shortage but rather to help them to choose the course of study or career that suits them best having regard to their aptitudes or inclinations. Similarly, literature on occupations is usually purely descriptive and only refers to the state of the employment market at the time. References to the future of the occupation are usually very brief and cautiously worded, the aim being to avoid provoking any undue reaction from readers.

Side by side with this, however, efforts are being made to interest young people in technical occupations, and the educational system itself is increasingly being used for this purpose. In Belgium, for example, the bottom classes of the intermediate level in a number of schools have, as an experiment, been turned into vocational guidance classes; as part of this experiment six hours of technical education per week are given to all pupils under the general education course. In the United States attempts are being made to give school-children a better insight into the nature of our technological age and stress is being placed on practical work at all levels. In France all children between the ages of 11 and 13 will in future have to pass through " observation " classes the curriculum of which includes experimental scientific work. In Sweden pupils are given workshop practice during school hours so that they can get to know certain occupations at first hand; six days

[1] See the following articles on vocational guidance which have already appeared in the *International Labour Review*: Vol. LVII, No. 4, Apr. 1948, pp. 300-314 (United States); No. 5, May 1948, pp. 438-455 (Sweden); No. 6, June 1948, pp. 591-602 (Poland); Vol. LX, No. 4, Oct. 1949, pp. 391-408 (France); Vol. LXXV, No. 4, Apr. 1957, pp. 319-334 (Federal Republic of Germany); Vol. LXXIX, No. 6, June 1959, pp. 611-623 (Italy); Vol. LXXX, No. 3, Sep. 1959, pp. 250-261 (Great Britain); and No. 6, Dec. 1959, pp. 489-504 (Belgium).

are devoted to this during the last year of the seven-year elementary schools, 12 days during the last year of the eight-year schools and four weeks during the last two years of the nine-year " unified " schools. In the East European countries it is also considered that reorganisation of the educational system on polytechnic lines should help to stimulate and develop young people's interests in science and technical subjects.

Various other schemes have been introduced, such as factory tours, which are being organised on a growing scale, especially in the United Kingdom, Sweden and the East European countries. Clubs where young people can experiment on their own and satisfy their technical and scientific curiosity in a more practical way are becoming more and more popular, for example in the United States and, above all, in the U.S.S.R.

There are also other special arrangements for the benefit of young people, often on a nation-wide basis. In the United States the President's Committee on Scientists and Engineers held a National Science Youth Month in 1957 in conjunction with various bodies concerned with scientific education; " clinics ", talent searches, etc., have also been organised for many years to attract young people towards science.

In the U.S.S.R. advanced educational institutions organise " at home " days every year when young people are free to visit them and find out whatever interests them about the courses given and the jobs and occupations to which they lead.

The Preparation of Young People for Employment

The preparation of young people for employment tends to be grafted on to an increasingly broad basic education, especially in science, with more emphasis on practical work in the workshop or laboratory. It has been found that the traditional type of education is not technically suitable as a preparation for a proper vocational training.

Quite far-reaching changes in this direction have either been carried out or are planned in a number of industrial countries. Two examples may be quoted. In the United States the teaching of mathematics and science is becoming increasingly important in high-schools. Non-vocational industrial arts courses (processes, tools, machines and materials) now form part of the general education syllabus and the latest statistics show that nearly 50 per cent. of the pupils in the junior high-schools are taking these courses. In France the number of hours devoted to mathematics has been increased in all the junior level classes and the same applies to the number of hours devoted to practical physics in the " mathematics " class.

These additions to the syllabus have forced many countries to raise the school-leaving age, thus bringing it into line in many cases with the changes brought about by higher living standards. This step affects not only the basic education given but the whole of the machinery for training technical and scientific supervisors. On the other hand, where the length of apprenticeship varies from one occupation to another, e.g. in the Federal Republic of Germany and Sweden, it has been found that, while a handful of the new occupations call for a longer period, the average apprenticeship is tending to shorten, largely because the general educational standard of candidates is higher and the teaching methods are better. During the same length of apprenticeship, however, the amount of time devoted to theoretical instruction is increasing appreciably. This is in fact one of the most significant of recent trends in the vocational training of the young.

Broadly speaking, the preparation of the young for employment now involves the large-scale extension of scientific and technical education, a preference for a multi-purpose training, a tendency to bring theory and practice closer together, and increasing attention to general education.

Extension of Scientific and Technical Education

The basic purpose of providing technical training is to give young people who have to start work as soon as they leave school at least a smattering of a skill, because the number of jobs requiring no special qualification is bound to go on falling over the next decade. A conference in the United States held in January 1959 on ways and means of enabling the educational systems of the big cities to prepare young people for employment declared—

> No plan or programme for vocational education in our secondary schools can be geared exclusively to high-school graduates, because there will continue to be many youths who will enter the labour market at the earliest legal age who have not completed high-school.[1]

Under the French educational reform of 1959 compulsory schooling is to be followed by further general education, plus practical instruction in agricultural, handicrafts, and commercial and industrial occupations. In the Netherlands the primary vocational schools allow young people in the two years before the official school-leaving age to take one of three courses, namely metalworking, woodworking, or special trades such as painting or masonry ; during the last year a sharper discrimination is made among the metalworking and woodworking trades. In the United Kingdom the Carr Report recommended that industry should give training to young people who are not serving an apprenticeship. In Sweden pupils at the " unified " schools can opt in their last year for a practical or vocational course which gives them some preparation for employment ; in such cases they spend half their time in an agricultural, industrial or commercial establishment or in a school workshop. In the U.S.S.R. the eight-year school is a polytechnic as well as a general institution and familiarises young people with various trades. Since 1957 pupils at the eight-year and secondary schools have been devoting more and more time to productive work.

Technical and scientific training facilities at the stage following compulsory schooling and intermediate level education have also expanded considerably. This expansion has been particularly marked at the level between vocational education and higher education, because of the need to train large numbers of intermediate technical supervisors.

In the Federal Republic of Germany [2], for example, entry to the engineering and technical high-schools has been eased, as was mentioned earlier, by the introduction of special courses for manual workers ; the capacity of these schools has also been greatly expanded. In the United States the growth in the demand for scientific technicians, engineering technicians and engineering aides has led to the establishment of technical institutes with a syllabus which is largely technological in character and usually lasts for two years; these institutes come half-way between the secondary or vocational schools and the advanced engineering

[1] *School Shop*, Vol. XIX, No. 2, Oct. 1959, p. 21.

[2] See E. KRAUSE : " Vocational Training in the Federal Republic of Germany ", in *International Labour Review*, Vol. LXXVII, No. 3, Mar. 1958, pp. 209-219.

schools ; a number of them have come into being over the past few years, side by side with the schemes for training technicians up to a standard below graduate level and the " co-operative " system which combines study with work in industry. Highly qualified technicians are also trained under regional vocational education programmes.

In France the technical lycées and kindred institutions now provide (immediately after the " observation " classes) a four-year course for technical assistants and a five-year course for technicians. Senior technicians are trained in special schools or departments which cater mainly for qualified technicians, trainees who have taken upgrading courses and candidates for the engineering schools. In recent years a number of advanced upgrading institutions have come into existence, e.g. at Grenoble, where workers can qualify as engineers by taking full-time courses.

In Great Britain there were 600 technical schools in 1958, of which eight were colleges of advanced technology which train engineers up to a high standard and have come into existence since 1956 to cope with the acute shortage of engineers and scientific workers. The Government is also, as was mentioned earlier, making considerable efforts to increase the number of technical schools.

In Sweden, too, there has been a rapid expansion of the technical school system over the past few years ; these schools, of which it is expected there will be 41 by 1962, train technical assistants and also engineers up to an elementary standard.

In the U.S.S.R.[1] the expansion of technical education can be gauged from the number of diplomas granted by advanced educational institutions and specialised secondary schools, which increased from 340,000 in 1940 to 770,000 in 1957. The rise in the output of engineers and technicians is particularly striking—from 54,000 in 1940 to 290,000 in 1957.

In some countries new courses have also been introduced and new institutions set up to bring technical and scientific education into line with the special demands for knowledge created by technical change. A few examples can be given here. In the Federal Republic of Germany, while the principle is maintained of giving students in the technical high-schools, universities and engineering schools a good technical grounding, without any undue specialisation, some institutions have introduced or are planning to introduce the teaching of nuclear physics and techniques (usually in the form of optional courses) ; industry is insisting also on the study of such subjects as servo-mechanisms, electrothermy and steel construction. In addition, the amount of time devoted to some subjects which are already taught (applied mathematics, chemistry and mathematics) has been increased. In France the Conservatoire des Arts et Métiers, as an example, is giving courses on chemistry as applied to nuclear science and industry, nuclear physics, automation in industry and plastics. New institutions have also been set up, including the National Institute of Nuclear Science and Technique, the National Institute of Applied Science, national schools for radiotechnics and applied electricity, the Advanced Electro-technical Institute and the School for Radio-electricity and Electronics. In Sweden the engineering and electrical departments of the technical schools have asked for their syllabus to be overhauled so that they can keep up with technical developments.

[1] H. ZELENKO : " Vocational and Technical Training in the U.S.S.R. ", in *International Labour Review*, Vol. LXXX, No. 6, Dec. 1959, pp. 489-504.

In the U.S.S.R. apart from changes in syllabus to take account of scientific and technical innovations, the growth of factory mechanisation and automation has given birth to a special type of training. In nearly all the advanced educational institutions students in various branches of engineering take a number of special subjects involving the automation and remote control of manufacturing processes, on top of the usual syllabus. In many advanced institutes for training engineers specialising in the design, construction and operation of automatic control, and remote-control instruments and equipment, courses are given in such subjects as precision instruments, automation instruments and equipment, remote-control and electro-metering equipment, calculating machines and electronic computers. The *tekhnikums* train specialists in various types of automation and remote control to serve as junior technical supervisors in factories and workshops.[1]

Multi-purpose Training

There is a growing trend towards multi-purpose training. Modern techniques require from each individual an unprecedented amount of co-operation with others and a general grasp of production processes. Some of the newer occupations overlap some of the older trades, and there is a clear need for diversified training at all levels from the skilled worker up to the engineer.

As far as skilled workers are concerned, the chief purpose of training must be to facilitate transfers from one occupation to another—which will become commoner with the rapid introduction by industry of the new techniques created by science. This aspect was emphasised in a report on technical education published in the United Kingdom in 1956. The report states—

> Technical education must not be too narrowly vocational or too confined to one skill or trade. Swift change is the characteristic of our age, so that a main purpose of the technical education of the future must be to teach boys and girls to be adaptable.[2]

Multi-purpose training involves giving an apprenticeship in sufficiently general basic or " parent " trades for it to be possible to graft a number of specialisations on to them later. For example in the Federal Republic of Germany trades have been regrouped and the number of them taught has thus been reduced in recent years. Similarly in France there has been a tendency to standardise the certificates of vocational aptitude because there was too much regional variation. In some instances apprentices learn several trades in succession. For example in the U.S.S.R. a worker can learn two or three ; the additional trades are taught either by pairing workers off so that they can teach each other or at special courses. The French Federation of Metallurgical and Mining Industries also provides this type of multi-purpose training by teaching its apprentices two trades, e.g. they may be fitters and turners, or fitters and milling-machine operators. This practice obviously has its limits because it can only be done within a group of trades which are related or at least fairly close to each other.

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[1] Economic Commission for Europe, 14th Session : *Report on the Industry and Materials Committee to the Economic Commission for Europe*, document E/ECE/334-G of 23 Feb. 1959 (mimeographed), Annex II, Appendix III, pp. 1-3.

[2] *Technical Education*, op. cit., p. 5.

Linking Theory and Practice and Raising the Standard of General Education

The increasingly technical nature of many jobs places a premium on the ability to express oneself clearly and to pass on information accurately ; this ability can only be developed by a sound general education. However, a good grounding in theory is also needed. Efforts to bring theory and practice closer together have been a feature of many schemes in recent years, and the forms of aid enabling trainees to combine study with employment referred to earlier in this article have been mainly designed with this in mind. This may work either way, i.e. practice may be supplemented by theory, or theory by practice. The distinction between the two is justified by the divorce between the type of training hitherto generally given to pupils in technical schools and similar establishments, and that given to students at higher educational institutions. The Chairman of the French Council for the Improvement of Human Relations in the Economy has summed up the position in a few words : " It is apparent that some [i.e. the students at the leading scientific schools] have been trained to live in a mathematical universe, while the others [i.e. supervisors and skilled workers trained by the technical schools] have been fitted for a world where nothing counts but matter." [1] One of the best examples of the trend to relate theory and practice more closely is to be found in the U.S.S.R., where the whole of the recent reorganisation of the educational system is, in fact, designed to bridge the gap between education and real life, which the authorities have been denouncing.

The expansion in general and theoretical education side by side with that of practical training has been made necessary by the amount of brainwork now required in many occupations, especially the growing place given to judgment and powers of analysis, expression and abstraction. This need has been enhanced by the fact that many young people who take technical courses have not had a good general secondary education.

In countries where vocational training is mainly given in industry itself this trend has met with a certain amount of resistance from the employers, who often look at training from a strictly utilitarian angle. However, it is now becoming more widely acknowledged in industry that a better general and theoretical background means better workers. The vocational training department of the French Federation of Engineering and Metal Working Industries has found, for example, that the percentage of passes in the technical part of the trade test rose from 30 to 60 per cent. whenever the number of hours of theoretical training and general education was increased from three to nine. A number of steps have accordingly been taken to see that the necessary instruction is given from now on. In the Federal Republic of Germany, too, all young people between the ages of 14 and 18 who are serving an apprenticeship or taking a course of training must attend classes of specialised technical training to supplement their practical work or training, combined with instruction on their country's economic, social, political, and cultural situation. They are exempted if they are attending special supplementary day courses which provide vocational training in the shape of practical and theoretical instruction in certain trades, while at the same time

[1] J. SERIEYX : *La formation professionnelle et les relations humaines* (Paris, Editions Sedom, 1952), p. 4.

improving the pupil's general education.[1] In the United States the training given in the regional vocational programmes must include general education courses for pupils whose background is not adequate to enable them to benefit by the instruction provided. In France for a number of years past the apprenticeship centres have taught the theoretical as well as the practical aspect of the trades for which they cater. Sometimes a full-scale course in general education, theory and the humanities is provided for apprentices. In the United Kingdom growing numbers of apprentices are being given time off for one or two days a week so that they can take theoretical courses in the technical schools. The City and Guilds Institute (in London) and similar bodies are also doing a great deal of work in this direction. In the U.S.S.R. the need for workers to have a good general background as well as a sound technical training is officially recognised. Between 1940 and 1954, in fact, the amount of time devoted to general subjects in vocational training school syllabuses rose from 9.5 to 14.7 per cent. of the total, and the time devoted to special technical subjects from 13.7 to 19.7 per cent. ; on the other hand, the time devoted to vocational training proper fell from 72 to 61.3 per cent. The Act reorganising the public education system provides for the progressive conversion of the labour reserve institutions into urban and rural vocational and technical schools which, building on the elementary, scientific and technical training and general education received by pupils from the eight-year schools, will give their pupils a further general education.

For the training of the medium level and senior technical supervisors the increased emphasis on combining theory with practice has tended to take the form of helping them to spend part of their time in industry. A pamphlet published by the United Kingdom Ministry of Education states the problem clearly in connection with the " sandwich " courses as follows:

> Part-time courses have served industry well, and will continue to be available for those who want them. But as the structure of industry and commerce becomes more and more complex, and as technology develops more and more quickly, part-time courses cannot be relied upon to produce enough highly qualified men and women.... The " sandwich " course is probably the key to a really big expansion of technical education at the advanced level. Many industrialists find that in addition to, or even instead of, university trained scientists and engineers, they need men and women who have " grown up " in industry, and combine a sound academic education with the immediate grasp of shop-floor problems that can only be acquired through personal acquaintance with the actual production processes and the people engaged on them.[2]

These " sandwich " courses are made up of periods (usually lasting six months) of study in university colleges and of training in an industrial or commercial concern. In the United States the " co-operative " system of education has the same purpose, i.e. regular, continuous practical work is regarded as an essential feature of the educational process, and the qualifying conditions for the diploma include a minimum period of practical work and a minimum level of skill in it. In this way a close link is maintained between theoretical studies and the

[1] *Training of Scientists, Engineers and Technicians in the Federal Republic of Germany*, op. cit., pp. 5-6.

[2] *Britain's Future and Technical Education.* Prepared for the Ministry of Education by the Central Office of Information (London, undated), p. 9.

difficulties actually encountered on the job. In the U.S.S.R. technicians attending special secondary schools are given a theoretical and practical training combined with a general education corresponding to that of an ordinary secondary school.

Where engineers are concerned, the need for a broader training is also recognised. This may take the form of placing greater emphasis on the humanities or general education, or alternatively (where the latter is traditionally sound) of emphasising the practical side. In the United States a survey by the Department of Education in 1954 showed that in 112 institutions holding four-year courses for future mechanical engineers, 9.5 per cent. of the time had to be devoted to the social sciences and arts subjects; in the four institutions where the course lasted for five years, 12.2 per cent. of the curriculum related to social sciences and literature. This is also found in other industrial countries such as Sweden, where courses in social psychology have been included in the syllabus for some types of engineer. In France the Armand-Rueff Committee has recommended a better training in the humanities for engineers.

In the U.S.S.R. it is becoming increasingly common for senior secondary-school pupils to spend short periods in factories; those pupils who do well enough are given priority over other applicants for day courses at advanced institutions. The number of these pupils taking such courses rose from 27 per cent. of the total in 1957 to 45 per cent. in 1958. The 1958 Act stipulates that advanced studies must be associated with productive work; in particular, engineering courses must enable students to become thoroughly familiar with the technology of production processes.

Conclusion

Thus, as a result of constant technical progress and economic expansion, all the countries which are highly industrialised—and therefore concerned about productivity and efficiency—have found that thorough preparation for employment with ample opportunity for promotion at all levels is essential in every branch of the economy.

There are a number of items on the credit side of this technical progress as far as young people are concerned. Those who are now coming on to the employment market, or are preparing to do so, are benefiting by the community's awareness of the fact that they are an asset for its future economic development. Growing numbers of them must be educated more broadly and up to a higher standard than in the past, to meet the immense demands of technical progress today and in the future. Their employment prospects are becoming better, not simply because the more widespread information about careers and the availability of vocational guidance helps them to decide on their future with a fuller knowledge of the facts, but also because the gap between vocational training and advanced education is tending to close, and the large number of individuals in all countries who cannot work their way up to the top of the educational ladder have a wide choice of opportunities as medium-level scientific or technical staffs. It is also becoming easier to transfer to senior posts. Lastly, the demands of modern techniques in the realm of knowledge are tending to create a modern type of humanism which reconciles the "two cultures" and brings theory and practice closer together; this trend has only just begun, but a better-rounded type of trainee should emerge as a result.

Accompanying these gains there are of course a number of factors which hold back the new trend, e.g. the shortcomings of forecasting methods and the delays in making the necessary adjustments as needs arise for information, vocational and school guidance and preparation for employment. However, while these shortcomings, from which young people are the main sufferers, must be placed on the debit side, it is true to say that steps are being taken or are planned in all the industrial countries to deal with them.

The volume of employment, as we have seen, does not seem to pose any problem at the present time. Nor does technical progress appear to have delayed the entry of young people into the active population, except in order to improve their training ; and employers seem to prefer young workers, who are more mobile and therefore more adaptable. This greater adaptability, which is one of the chief features of the workers being trained at the present time, is undoubtedly their best safeguard for the future.

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Woman, Wife and Worker in Great Britain

The increasing number of married women at work in Great Britain has given new life to the age-old debate on " women's place ". In 1955 about 48 per cent. of the women in the female labour force in Great Britain were married. Between 1931 and 1955 the number of married women at work more than trebled, while the number of single women workers fell by about 1 million. A recent booklet [1] summarises the main findings of a limited inquiry into the subject carried out in Bermondsey by the Social Science Department of the London School of Economics and published by the Department of Scientific and Industrial Research. The main report is to be published later.

Bermondsey, in the East End of London, is an old-established industrial area with a long tradition of the employment of married women. With growing labour shortage, women have been employed in larger and larger numbers in its factories. The research centred on a biscuit factory which employed at the time the study began some 4,000 workers of whom 3,000 were women, four-fifths of them married. It is interesting to note that extreme labour shortage had forced the firm to reverse its pre-war ban on the employment of married women. Only a quarter of the women worked full-time ; the rest—most of them married—worked on short shifts.

Most of the women worked mainly for financial reasons. True, as almost all their husbands were in regular employment it was not for the basic necessities of life that more money was required. For most women the main aim was a higher living standard for their families : new furniture or other home needs and appliances, television sets, clothing, holidays. A second and subsidiary reason was the loneliness of household life in small homes with small families to look after.

For the great majority, work was regarded as desirable but not essential, clearly less important to them than their families ; and whenever possible, they fitted their hours of work to their family responsibilities. Their idea of a " good job " was one which made no claims running counter to their domestic ties and duties, and which at the same time made possible stable social contacts. They had very little interest in promotion or in shouldering responsibility on top of their commitments in the home.

The combination of job and home responsibilities seemed to leave them with little time, desire or perhaps need for a more active interest in either official trade union matters or in the various factory clubs and recreational activities.

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[1] Department of Scientific and Industrial Research, Great Britain. *Woman, Wife and Worker.* By the Social Science Department, the London School of Economics and Political Science. London, H.M. Stationery Office, 1960, 31 pp. 2s.

Absenteeism illustrates this attitude towards work. Married women appeared to have a less favourable record of attendance than any other type of worker. The survey showed that in the last half of 1955 the married women's absence rate was 40 per cent. higher than that of men and that it fluctuated sharply and was less predictable. There was also marked variation in absenteeism between the different shifts. The shift from 9.30 a.m. to 4 p.m. and the evening shifts, with mainly the younger mothers, had the highest absence rates. Significantly enough women working full time had the lowest.

The firm's management recognised the problem of absenteeism among married women, particularly for those who had to choose between their children and their employer, for instance in school holidays or in case of illness. It introduced a system of approved absence, under which a personnel officer, in consultation with the supervisors affected, screened requests for absence without pay.

Married women working part time were found to have a higher labour turnover than those working full time, but again there was a marked difference between shifts. A study of 100 married women engaged in the late spring of 1955 showed that 25 of them never started work, 40 left within three months and another 17 within six months, leaving only 18 survivors. The causes of turnover are not easily identifiable. But the study of those who left within six months indicated that " most of them moved straight into other employment, which suggests dissatisfaction with the job, rather than difficulties at home ". This conclusion is enforced by a comparison between the women who had children at home and those who had none, because by the end of six months all the single women recruited and all the married women without dependent children had left. Among the part-time workers, the most unstable were women with children under 5. It was clear, too, from all the evidence that the evening shift (5.45 to 9.30 p.m.) made the greatest demand on the family as a whole.

Of those who left after long service (though only a few cases were examined), about one-half had obtained other work, often lighter work, and the other half had stayed home, often for reasons of " ill-health ".

Examining the figures for labour turnover in conjunction with those for stability, a different picture of women part-time workers emerges. Apart from those on the 9.30 a.m. to 4 p.m. shift, more than 80 per cent. of the women part-time workers had been with the firm for more than a year. If a woman stayed the first six months, there was a good prospect of her staying with the company for a long time. " There was little in the company's experience to support the common belief that part-timers can only be regarded as temporary workers."

As to output, there was no evidence that the average hourly output of the part-timers was either higher or lower than that of those on full time.

On all scores the morning shift (7.30 a.m. to 12.30 p.m.) had consistently the best record, possibly because of the high proportion of women with no young children, while the day shift (9.30 a.m. to 4 p.m.) was the least satisfactory on all counts.

The large-scale employment of married women, mostly on a part-time basis, made new demands on management, particularly in the initial period. Part-time employment made extra work and extra costs. It placed a strain on supervisors as the following description of work in a packing department illustrates :

> It is one thing to organise and control the work of a couple of hundred women who remain a homogeneous group from the time they come in the

morning until the department shuts down in the evening. It is a very different matter to keep work flowing smoothly and efficiently under such continually changing conditions as those found in this department. An incomplete labour force assembled at 7.30 a.m. and was reinforced by a second shift at 9.30 a.m. The great majority of those starting at 7.30 a.m. did not reappear after the mid-day break, when their places were filled, but usually not completely, by the afternoon shift coming in at 1.30 p.m. The afternoon period was then interrupted by the departure of the 9.30 a.m. shift at 4 p.m., and when the department closed at 5.30 p.m. it had to be left in such condition that the evening shift, another 32 women and under a different supervisor, was able to take over at 5.45 p.m. This situation, made worse by an absence rate which might reach 25 per cent. on any one day, presented many opportunities for mistakes and misunderstandings, complicated the organisation of work and required exceptional concentration and control from the two supervisors.

The need for flexibility on the part of management, particularly as regards adjustment of hours of work and leave of absence for domestic reasons, was clear and recognised in practice. Yet labour " wastage " was high, often as the result of unrealistic expectations on the part of the women workers and too many temporary job transfers—themselves the result of the high rate of absenteeism. The problem of absenteeism proved the biggest challenge to management and the biggest unsolved problem ; management was dealing with " a labour force which to all intents and purposes had been granted the freedom to work when it pleased ". The importance of good supervision, " the key to success in the employment of married women "—as indeed in that of all workers—was particularly stressed.

The women workers themselves took the view, on the whole, that " the neglectful mother is not the one who works but the one who is too lazy or indifferent to take advantage of today's opportunities to raise her family's standards ". Clearly, however, many of them had home worries, especially about the well-being of their children, though there was little or no evidence that out-of-home employment of the mothers had any ill effects on the children. There was, for example, little evidence of young children returning to empty houses. Of the 42 per cent. of the women who had a child or children of school age only 2 per cent. worked full time and the very small number of full-timers with pre-school age children worked because they badly needed the money.

The husband's role in the family underwent considerable change. His co-operation in the daily routine of household organisation and maintenance and child-care was essential and the women claimed that as a result husbands were closer to the children as well as proud of the higher standards of family life the women's earnings made possible. Nevertheless the main burden of the double job of work and home fell on the women who, in order to achieve their aims, had to work a long and exacting day in accordance with a disciplined timetable.

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Documents of the International Labour Conference.

Forty-fifth Session, 1961. Report I : *Report of the Director-General.* Geneva, 1961. In two parts.

The report of the Director-General of the I.L.O. to the Forty-fifth Session of the International Labour Conference comprises two parts. The first deals

with labour relations, and the second, which is at the same time the Fifteenth Report of the I.L.O. to the United Nations, gives an account of the I.L.O.'s activities over the past year.

Part I : *Labour Relations : Present Problems and Future Prospects.* 118 pp. $1 ; 6s.

This year the Director-General has taken as the theme of his report to the International Labour Conference the subject of " labour relations " in its widest sense.

The report starts with an examination of economic organisation—the setting of labour relations—in which the Director-General draws attention first to the trend towards economic concentration (whether in private hands or in those of large national corporations) and to the growing role of the State, which, apart from its traditional function of fixing the legal framework of labour relations, is everywhere by far the largest employer and plays an ever more important part in planning and development.

After reviewing the social organisation of the undertaking (relations between management and workers, co-operation at the level of the undertaking, and labour relations in small-scale industry and agriculture), Mr. Morse next turns his attention to the steps taken in many countries to mobilise human energies for economic development—land reform, co-operative and collective farming, " people's communes " in mainland China, community development, and new forms of manpower mobilisation in various African countries. He points out that the I.L.O. has important responsibilities in connection with the social aspects of such schemes, its particular concern being that they should be based on the voluntary participation of those involved.

The last two chapters of the report are devoted to labour relations and technical progress, and to changing aspects of labour-management relations. In the former the Director-General attempts to answer the questions : How does the emphasis placed on security and stability of individual labour relations change the state and general trend of such relations ? How is it possible in practice to reconcile the apparent contradiction between the worker's need for security and technical progress which leads to change and therefore to insecurity ? In the last chapter he discusses trade union problems, labour disputes and their settlement, collective bargaining, consultation and co-operation at the industrial and national levels, and research and education directed towards a better understanding of labour relations.

Summing up, the Director-General singles out, as the main aims of a satisfactory system of labour relations, full respect for the worker as an individual, and harmonisation of the interests of workers and employers with those of the community at large. An essential part in the achievement of these aims can, he believes, be played by better understanding of the human and social problems of work ; the development of free, democratic, independent and responsible workers' and employers' organisations ; the promotion by governments of co-operation in labour relations ; the growth of joint machinery freely established by the parties concerned ; and the evolution of labour relations systems that are in tune with national traditions and economic and social characteristics.

Part II : *Activities of the I.L.O., 1960.* Report of the Director-General (Part II) to the International Labour Conference, Forty-fifth Session, 1961. Fifteenth Report of the International Labour Organisation to the United Nations. 76 pp. 75 cents ; 4s. 6d.

The Director-General's annual review starts with a summary of the major current developments in I.L.O. action during 1960. Chapter II discusses economic development, manpower and employment—particularly training and productivity, and rural development. Chapters III and IV deal with the I.L.O.'s work in the social field (wages, hours of work, social security, safety and health, housing, vocational rehabilitation and the conditions of particu-

lar categories of workers) and its efforts to promote sound institutions in the fields of labour administration, workers' education, and labour-management relations.

Other Documents.

Accident Prevention. A Workers' Education Manual. Geneva, 1961. viii+182 pp. 75 cents ; 4s. 6d.

This is the fifth in a series of workers' education manuals published by the I.L.O. [1]

It is divided into 14 lessons, each of which is followed by questions designed to recall the subject-matter and to stimulate thought. A number of suggestions for further reading are given in an appendix.

The manual does not purport to deal comprehensively with the subject of occupational safety. Nor does it pretend to cover every occupational field ; it is, in fact, addressed almost exclusively to workers in manufacturing industries, and will give little specific guidance to the miner, the farm worker or the bricklayer. Lastly, it is not a technical manual. It does not attempt to tell people how to prevent every kind of accident or guard every kind of equipment that could be met with in a factory. Its purpose is to explain why safety is important, by what methods it is promoted and what kinds of authorities, institutions and other organisations are responsible for promoting it.

The subject of occupational health is to be dealt with separately and is not touched upon in the present manual.

Publications of the United Nations and Other Intergovernmental Organisations

Organisation for European Economic Co-operation.

The Organisation for Economic Co-operation and Development. Convention of 14th December 1960. Report of the Preparatory Committee. Related documents. Paris, 1960. 144 pp. 5s.; 75 cents; 3 NF; 2.60 marks.

Pan American Union.

Human Rights in the American States. Study prepared in accordance with Resolution XXVII of the Tenth Inter-American Conference. Preliminary edition, November 1960. Washington, 1960. vi+226 pp.

Other Publications *

General.

INSTITUT DE SOCIOLOGIE SOLVAY, Centre d'étude des pays de l'Est, Université libre de Bruxelles. *Le régime et les institutions de la République populaire chinoise.* Journées d'études, 12-16 octobre 1959, en collaboration avec le Centre national pour l'étude des pays à régime communiste. Brussels, 1960. 227 pp. 210 Belgian francs.

[1] The manuals hitherto published are *Co-operation* (1956), *Social Security* (1958), *Freedom of Association and Protection of the Right to Organise* (1959), and *Collective Bargaining* (1960).

* Mention of a book without a note does not preclude publication of a note in a subsequent issue of the *Review*.

NEMSCHAK, Franz. *Österreich und die europäische Integration.* Vorträge und Aufsätze, Heft 14. Vienna, Österreichisches Institut für Wirtschaftsforschung, 1960. 57 pp.

PACTET, Pierre. *Les institutions politiques de la Grande-Bretagne.* Paris, La Documentation française, 1960. 307 pp.

WALLICH, Henry C. *The Cost of Freedom. A New Look at Capitalism.* New York, Harper & Brothers, 1960. x+178 pp. $3.75.

WILGUS, A. Curtis (editor). *The Caribbean : Contemporary Education.* A Publication of the School of Inter-American Studies, Series One, Volume X. Gainesville, University of Florida Press, 1960. xx+290 pp.

Social and Economic Questions.

BRYCE, Murray D. *Industrial Development. A Guide for Accelerating Economic Growth.* New York, Toronto, London, McGraw-Hill Book Company, 1960. xvi+282 pp. $7.50.

CENTRO DE ESTUDIOS SINDICALES. *Fichero de historia económico-social. No. 3 : Estados Unidos.* Madrid, Organización Sindical Española, 1960. 587 pp. 75 pesetas.

DEPARTMENT OF LABOR, Bureau of Labor Standards, United States. *State Child-Labor Standards.* Bulletin 158. Revised 1960. Washington, 1960. x+210 pp. 60 cents.

EGNER, E., SEILER, G., and STUCKEN, R. *Untersuchungen einzelner Entwicklungsländer. Peru, Tunesien, Ägypten und Syrien.* Berlin, Duncker & Humblot, 1960. 132 pp.

Eigentum und Eigentümer in unserer Gesellschaftsordnung. Veröffentlichungen der Walter-Raymond-Stiftung, Band 1. Cologne, Opladen, Westdeutscher Verlag, 1960. xii+239 pp.

FLORY, Charles. *Le catholicisme social devant la crise de civilisation. Recherches et perspectives.* Préface d'Alain BARRÈRE. Postface de Joseph FOLLIET. Lyons, Chronique sociale de France, 1960. viii+259 pp. 10 NF.

Contains the opening speeches made by the author at the French " Semaines sociales " from 1945 to 1959, thus tracing the history of the Catholic Social Movement, at the same time as it presents the author's approach to the problems involved.

FREY, Erich. *Arbeitsbereitschaft, Rufbereitschaft, Bereitschaftsdienst in Arbeitszeitrecht und Lohnrecht.* Schriften des Betriebsberaters, Heft 22. Heidelberg, Verlagsgesellschaft " Recht und Wirtschaft ", 1960. 47 pp.

HARVEY, Pierre, and FERLAND, Philippe. *L'état actuel des institutions corporatives dans la province de Québec.* Etude nº 13. Montréal, Institut d'économie appliquée, Ecole des hautes études commerciales, 1960. 134 pp. $1.50.

HAZLITT, Henry (editor). *The Critics of Keynesian Economics.* Princeton, New Jersey, Toronto, New York, London, D. van Nostrand Company, Inc., 1960. viii+427 pp.

KUBOTA, Akiteru. *Essais sur François Quesnay.* Tokyo, The Science Council of Japan, Division of Economics, Commerce and Business Administration, 1960. 62 pp.

MINISTRY OF EDUCATION and SCOTTISH EDUCATION DEPARTMENT. *Grants to Students. Report of the Committee Appointed by the Minister of Education and the Secretary of State for Scotland in June, 1958.* London, H.M. Stationery Office, 1960. xii+135 pp. 6s. 6d.

MINISTRY OF FOREIGN AFFAIRS, Japan. *Exports and Wages—The Case of Japan*. Tokyo, 1960. 20 pp.

By examining Japan's wage and export data, this booklet seeks to show that the export performance of Japan is not dependent on low wages. The first part is given over to a comparison of the average wage levels of particular countries. It is concluded that, taking account of non-pecuniary benefits, Japanese " wages " are approximately on the same level as those in Italy.

The possibility is then examined that competition from Japanese exports might be considered unfair on the grounds that these come mainly from small and medium-sized enterprises, which pay lower than average wages. The findings do confirm that the level of wages paid by different enterprises decreases with size, in small firms being approximately a third of those paid by large enterprises. This disparity is attributed both to the contrasting levels of productivity in these two types of establishment and to the differences in the quality of labour which they employ. It is likely that imperfect labour mobility between the large and small enterprises, to which attention is drawn, also plays an important role in maintaining these wage differentials —although there are some signs that they are beginning to narrow.

However, the survey shows that, in fact, it is the large enterprises which are the mainstay of the Japanese export trade; in 1957 firms employing 500 or more workers accounted for as much as 70 per cent. of total exports by value. It is therefore concluded that Japanese exports are based on higher than average domestic wages.

MINON, Paul. *Katuba. Etude quantitative d'une communauté urbaine africaine*. Travaux de l'Institut de sociologie de la Faculté de droit de Liège. vii+90 pp. 92 Belgian francs.

This sociological survey undertaken by Paul Minon, Project Chief of the Institute of Sociology of the Faculty of Law at Liège, is based on census statistics obtained in 1957 by the Centre for the Study of Detribalised Africans in Elizabethville (Congo). Its purpose was to obtain a picture, by studying the population group of Katuba, of the structure, life and development of Congolese quarters in the proximity of European areas in large towns. The work consists of an analysis of the social characteristics of the population : age, background, length of residence in the town, family relationships, composition of families and living conditions.

NATIONAL BUREAU OF ECONOMIC RESEARCH, United States. *Demographic and Economic Change in Developed Countries*. A Conference of the Universities-National Bureau Committee for Economic Research. Princeton, Princeton University Press, 1960. xi+536 pp. $12.

A collection of 16 conference papers, accompanied by comments, dealing with population change and its economic effects in industrially advanced countries. The papers are preceded by a brief but useful introduction which defines the objectives of the conference and summarises the salient features of the topics under discussion.

Part I includes nine papers analysing various aspects of population change, based on studies of population fertility and the causes of fertility variations in the developed countries. Little attention is devoted to mortality rates, which, as noted in the introduction, vary relatively slightly in these countries. The industrialised countries can expect continued gradual increases in life expectancy. On the other hand, dramatic changes in fertility rates have occurred in recent years, frequently quite contrary to the trends anticipated by the classical theories of population growth.

Some of the economic consequences of population change are examined in Part II of the volume, including its effect on aggregate output, the supply of labour, uses of resources, and the demand for food and services.

PRUSA, Jan. *Příruční slovník ekonomiky práce*. Prague, 1960. 248 pp.

A dictionary of labour economics.

SALIN, Edgar. *Frédéric List, la Communauté européenne et la Zone de libre-échange.* Lausanne, Ecole H.E.C., Université, Centre de recherches européennes, 1960. 50 pp.

SCHMIDT, Helmut. *Die Bedeutung des Kapitals für die Einkommensbildung im landwirtschaftlichen Betrieb.* Schriftenreihe des IFO-Instituts für Wirtschaftsforschung, Nr. 41. Berlin, Munich, Duncker & Humblot, 1960. 144 pp.

UNIVERSITÉ DE NEUCHÂTEL. *L'entreprise.* Publié à l'occasion du 50me anniversaire de la Section des sciences commerciales, économiques et sociales. Mémoires de l'Université de Neuchâtel. Tome 28. Neuchâtel, Delachaux et Niestlé, 1960. 277 pp. 18 Swiss francs.

This book consists of nine contributions of considerably varying length, all turning on the theme of the undertaking, but approaching it from very different angles. The first and most important (it fills nearly half the book), by Maurice Erard, is entitled " Elements of Sociology within the Undertaking ". The author gives a general view of the human relations problems of all descriptions arising out of the operation of an undertaking ; special attention is given to questions of internal organisation and remuneration. The second article, by Frédéric Scheurer, demonstrates the need to develop a science of the undertaking, which the author suggests should be called " enterprise economy ". The other seven contributions deal with purely legal problems in connection with undertakings, either as related to Swiss legislation and jurisprudence or at the international level.

VALENCIA, Hugo. *Los servicios administrativos nacionales del trabajo.* Proyecto de Reestructuración del Departamento Ecuatoriano del Trabajo. Quito, Ecuador, 1960. 80 pp.

VEJVODA, Jaroslav. *Zbožnívýroba ve státním socialistickém sektoru.* Prague, Nakladatelství Československé akademie věd, 1960. 394 pp. 27 crowns.

Statistics.

KAUFMANN, Franz Xaver. *Die Überalterung. Ursachen, Verlauf, wirtschaftliche und soziale Auswirkungen des demographischen Alterungsprozesses.* Veröffentlichungen der Handels-Hochschule St. Gallen, Reihe A, Heft 58. Zürich and St. Gall, Polygraphischer Verlag, 1960. xxviii+540 pp. 28 Swiss francs.

This work, which won for its author a doctorate at the Commercial University of St. Gall, is a statistical and demographic study of the aging of the population. It consists mainly of an analysis of changes which have taken place in the age structure of the population and a searching study of the determining factors (birth, death and fertility rates), as well as the economic and social consequences stemming from the gradual and continuous aging of the population.

Many useful tables and diagrams, as well as a bibliography, are appended.

STATISTISCHES BUNDESAMT, Federal Republic of Germany. *Stichproben in der amtlichen Statistik.* Stuttgart and Mainz, W. Kohlhammer Verlag, 1960. 626 pp.

The Federal Office of Statistics of the Federal Republic of Germany, in collaboration with the statistical offices of the Länder, has just published this study of the methodological bases of sample surveys and their application to official German statistics.

The work is divided into three parts. The first is devoted to the theoretical aspects of the question. In particular it gives the reader a picture of the basic theoretical principles as well as the most important methods. Experience obtained during the organisation and carrying out of certain surveys is also described in detail.

The second part gives very detailed information on 38 sample surveys carried out since 1946 in the Federal Republic on population, economic activity, agriculture and forestry, industry and handicrafts, housing, wages, family budgets, public finances, etc. The surveys, all based on random sampling, were chosen because of their special importance or their interest from a methodological point of view. To facilitate comparison between the various surveys the descriptions are set out as far as possible according to a uniform plan. Information is given as to the purpose of the statistics and the use made of them, the available bases for sampling, the opportunities for stratification and the scope of the survey, the calculation of frequencies and variations, the preparatory work on which sampling and the stratification plan were based, systematic sampling, the calculation of errors, etc. The authors also describe the difficulties encountered in the implementation of the sampling plan and give indications as to the accuracy of the results obtained.

The third part, intended for specialists in sample surveys, contains information on the symbols and technical terms employed. It also repeats the most important of the formulae actually used and includes a few diagrams designed to simplify the preparation of plans for sample surveys.

The work is completed by a voluminous bibliography and a synoptic table showing the main characteristics of the surveys discussed.

Industrial Relations; Employers' and Workers' Organisations.

COHEN, Sanford. *Labor in the United States.* Columbus, Ohio, Charles E. Merrill Books, Inc., 1960. xii+676 pp.

Congrès des relations industrielles de Laval, 15me, 1960. Droits de gérance et changements technologiques. Quebec, Les Presses universitaires Laval, 1960. 149 pp.

GREER, Scott. *Last Man In. Racial Access to Union Power.* Glencoe, Illinois, The Free Press, 1959. 189 pp. $4.

Labour Law.

ALONSO GARCÍA, Manuel. *Derecho del trabajo.* Tomo II (Contrato de trabajo). Barcelona, José María Bosch, 1960. 679 pp.

GRÜLL, Ferdinand. *Der Anstellungsvertrag mit leitenden Angestellten.* Vertragsmuster mit Erläuterungen. 4. Auflage. Schriften des Betriebsberaters, Heft 10. Heidelberg, Verlagsgesellschaft " Recht und Wirtschaft ", 1960. 70 pp. 5 marks.

MINISTERIO DEL TRABAJO, Colombia. *Reforma del Código del Trabajo.* Bogotá, 1960. 454 pp.

Management.

DUSTAN, Jane, and MAKANOWITZKY, Barbara. *Training Managers Abroad.* New York, Council for International Progress in Management (U.S.A.), 1960. vi+527+lxi pp. $12.50.

Part I gives a brief outline of the work of governmental bodies, firms, consultants, associations, foundations, institutes, and centres for the reader who is interested in a general, over-all view of what private and governmental organisations throughout the world are doing in the field of international managerial training. Part II lists detailed information on the activities of individual organisations under the appropriate category, subdivided alphabetically by country.

UNIVERSITÉ DE LIÈGE, Faculté de droit, Institut de sociologie, Liège. *Problèmes de la fonction de personnel.* By Robert TOUBEAU and others. Liège, 1959. 202 pp.

This is a collection of the talks and lectures given during three seminars organised by the Institute of Sociology of the University of Liège on the theme of personnel management and personnel administration as related to the organisation of the undertaking.

The subject is presented under three headings, as follows: (1) the personnel service, its role in the undertaking, the training of its members, the numerous tasks it must carry out and the means of action at its disposal; (2) the dissemination of information from the management down, sources of information; (3) problems of organisation, with a thorough study of management structures, the sociological approach to analysis and a definition of the duties of executive staff.

Manpower.

DEPARTMENT OF LABOUR, Economics and Research Branch, Canada. *Trends in the Agricultural Labour Force in Canada from 1921 to 1959.* Ottawa, 1960. v+69 pp.

DEPARTMENT OF LABOR, Women's Bureau, United States. *1960 Handbook on Women Workers.* Women's Bureau, Bulletin No. 275. Washington, 1960. vi+159 pp. 45 cents.

ISTITUTO GIANGIACOMO FELTRINELLI. *Variazioni degli organici impiegatizi nell'industria italiana.* By Ruggero SPESSO. Saggi No. 2. Milan, Feltrinelli Editore, 1959. 115 pp. 2,000 liras.

In this quantitative and qualitative survey of salaried employees in Italian industry the author reviews general trends in the employment of non-manual workers in the world and in Italy, gives the distribution of salaried employees by occupational group in different Italian industries and retraces the trend of wages and salaries during recent times. Future prospects as regards the distinction between "manual" and "intellectual" work, new problems which will be met with by those taking trade union action on behalf of salaried employees, those arising out of the training of technical staff and the need for the State to take the necessary steps to promote a smooth transformation of the occupational structure are also studied. Numerous tables are included.

MINISTÈRE DU TRAVAIL, Belgium. *L'Office national du placement et du chômage a 25 ans d'existence, 1935-1960.* Brussels, 1960. 214 pp.+tables.

Published for the twenty-fifth anniversary of the Belgian National Placement and Unemployment Office (O.N.P.C.), this study gives a detailed account of the progress of this agency, which in the course of its existence has come to be entrusted with ever more numerous and more varied tasks. At the present time its main duty is to help the unemployed to find work, if necessary after vocational retraining. One of the most useful measures it has taken for this purpose has been the establishment, since 1946, of its own vocational retraining centres. In the sphere of placement the O.N.P.C. continues to play a predominating role; with its help the unemployment problem has been partially solved and the national production potential increased. It is constantly improving its methods and widening the scope of its action, and its specialised placement activities have steadily grown. A new impetus was given to the O.N.P.C.'s work on behalf of youth with the opening in 1957 of its "youth protection service" which has its own medical and psychological centres; early results appear encouraging.

The O.N.P.C.'s international activities have been constantly gaining in importance. Apart from the various forms of international interchange which have come into being since the war, such as recruitment for the government gold-mining schools in the Union of South Africa or for factories in Sweden,

it handles the placement of foreign workers in Belgium and the movement of workers in the frontier zones. It also has a part to play in relation to Benelux, the Western European Union and the European Coal and Steel Community. In addition, it has already made a valuable contribution in the realm of technical assistance to less developed countries.

In the last part of the book the O.N.P.C.'s activities in connection with the payment of unemployment benefit are reviewed in relation to unemployment trends in Belgium since 1935 and the unemployment regulations since 1945.

MORRIS, James R. *Employment Opportunities in Later Years*. Burlingame, California, Foundation for Voluntary Welfare, 1960. 125 pp.

Conditions of Work.

DEPARTMENT OF LABOR, State of New York. *Employment and Earnings of Interstate Migrant Farm Workers, New York State, 1959*. Publication No. B-116. New York, 1960. iii+29 pp.

KUHNEMUND, Richard. *Planung und Kontrolle des Arbeitslohnes in der sozialistischen Industrie*. Schriftenreihe des Instituts für Arbeitsökonomik und Arbeitsschutzforschung Dresden, Reihe Arbeitsökonomik, Heft 17. Berlin, Verlag Die Wirtschaft, 1960. 103 pp.+appendices.

MINISTRY OF LABOUR, Great Britain. *Health at Work*. London, 1960. 76 pp.

REES, Albert. *New Measures of Wage-Earner Compensation in Manufacturing, 1914-1957*. Occasional Paper 75. New York, National Bureau of Economic Research, 1960. ix+26 pp. 75 cents.

ROBERTSON, D. J. *Factory Wage Structures and National Agreements*. Social and Economic Studies 5. Cambridge, University Press, 1960. xi+260 pp. 40s.

The central theme of this book is the many ways in which wages paid in British factories differ both in amount and in structure from the agreements negotiated nationally for industries.

Case studies of wages in two engineering works and a shipyard introduce a general discussion of wages in the British engineering and shipbuilding industries. The two main points that emerge are that wages in factories do not conform to national agreements and that incentive wages and overtime play a very important part in determining factory wage structure.

The author expresses doubts about incentive wages and overtime. The principal objective of the former is output. In the author's view incentive wages are scarcely compatible with situations in which quality or ability or the loyalty of the workers are objectives which the employer is attempting to achieve. Since an incentive scheme requires that output can be measured satisfactorily, a suitable kind of output, an efficient measuring system, and a system of inspection are all needed. Also, it must be possible to make allowances for such changes in, for example, equipment, as may affect output, workers' attitudes must be favourable, and output must be responsive to changes in labour effort. Finally, an incentive scheme must not be altered in its detailed structure by bargaining.

As regards overtime, the author's concern is not with occasional overtime undertaken to meet some special emergency and specially remunerated by an extra payment intended to reflect roughly the degree of inconvenience to which the worker has been put; it is rather with persistent overtime working, organised on a regular basis, and continuing over long periods, which has been an important method of increasing output and payment in Britain throughout the post-war period. In these conditions overtime may not lead to a direct net increase in output, since, when overtime increases, hourly output both in normal and overtime hours may decrease, and there may be a loss in hours of work through sickness and absenteeism during

normal hours. Furthermore, with overtime the cost per unit of output may be lowered by the more intensive use of machinery, but raised by incurring fixed running costs for less than a full labour force and by production difficulties engendered by working short-handed, as well as by maintenance difficulties and the increase in labour cost due to overtime premiums. Also, there are disadvantages to the employer when he is expected to use overtime even when it is not needed.

The principal cost of overtime to the employee is the sacrifice of leisure it involves. Another important disadvantage of overtime, as well as incentive wages, is that it is uncertain and can lead to considerable variation in the size of pay packets.

The author points out that, under conditions of full employment, neither methods of controlling wages by deliberately reducing the demand for labour nor those which are specifically based on wage controls will avoid inflation; the two can be used together as a temporary expedient, but some way must be found to stabilise wages so that stability in the economy as a whole can be maintained. For this the present methods of wage settlement will have to be altered. The biggest disruptive forces, in the author's view, are the artificial settlement of national agreements and the gap between rates and earnings. " Wage stability is only possible when wages are settled more closely in harmony with the economic pressure bearing upon employers and with the forces which bear upon and determine wage structure. National agreements should be conducted at a very general level and confined to determining minimum wages and general conditions. Wage structure, and wage stability should be built up by much more local wage determination."

STRUCKMANN, Günter. *Die Arbeitszeitplanung in Industriebetrieben.* Ein Beitrag zur Diskussion über die Arbeitszeitverkürzung. Abhandlungen aus dem Industrieseminar der Universität zu Köln. Berlin, Duncker & Humblot, 1960. 193 pp. 22 marks.

Social Security; Public Health.

CENTRAL OFFICE OF INFORMATION, Great Britain. *Health in the United Kingdom Dependencies.* Reference Pamphlet No. 12. Second edition. London, H.M. Stationery Office, 1960. 37 pp. 4s.

DEPARTMENT OF LABOR, Bureau of Employment Security, United States. *Comparison of State Unemployment Insurance Laws as of January 1, 1960.* Washington, 1960. ix+148 pp. 45 cents.

— Bureau of Labor Standards, United States. *State Workmen's Compensation Laws.* Bulletin 161. Washington, 1960. vi+70 pp. 30 cents.

DEPARTMENT OF NATIONAL HEALTH AND WELFARE AND THE DOMINION BUREAU OF STATISTICS, Canada. *Illness and Health Care in Canada. Canadian Sickness Survey, 1950-51.* Ottawa, 1960. 217 pp. $2.

HEISSMANN, Ernst. *Das Mitbestimmungsrecht in der betrieblichen Altersversorgung.* Kritische Betrachtungen und praktische Vorschläge. Heidelberg, Verlagsgesellschaft " Recht und Wirtschaft ", 1960. 56 pp. 5.20 marks.

ISTITUTO NAZIONALE DELLA PREVIDENZA SOCIALE, Italy. *Sintesi dei principali sistemi previdenziali del mondo.* II edizione (aggiornamento al 31 dicembre 1959). Rome, 1960. 129 pp. 1,000 liras.

MINISTÈRE DU TRAVAIL, France. *Statuts types des sociétés mutualistes.* Paris, 1960. ii+63 pp.

MINISTERO DEL LAVORO E DELLA PREVIDENZA SOCIALE, Italy. *L'assicurazione per l'invalidità e la vecchiaia.* Quaderno 16, Rassegna del Lavoro. Rome, 1960. 143 pp. 300 liras.

NATIONAL INSURANCE INSTITUTION, Norway. *The Norwegian System of Social Insurance*. Oslo, 1960. 46 pp.

SCHNEIDER, Hans. *Die öffentlich-rechtliche Altersicherung freier Berufe und das Grundgesetz*. Schriftenreihe des Bundesministeriums für Arbeit und Sozialordnung, Heft 7. Stuttgart, W. Kohlhammer Verlag, 1959. 72 pp. 6.50 marks.

Social Security in Czechoslovakia. Prague, Práce, 1960. 122 pp.

Agriculture.

CENTRO DE ESTUDIOS SINDICALES. *Sindicalismo agrario español*. Madrid, Organización Sindical Española, 1960. 150 pp.

ECONOMIC AND STATISTICAL ORGANISATION, Government Board of Economic Inquiry, Punjab (India). *Economics of Tractor Cultivation in the Punjab for the Year 1956-57*. Chandigarh, 1960. iv+92 pp. 5 rupees.

ГЛАВНАЯ ИНСПЕКЦИЯ ПО ЛЕСНОМУ ХОЗЯЙСТВУ И ПОЛЕЗАЩИТНОМУ ЛЕСОРАЗВЕДЕНИЮ МИНИСТЕРСТВА СЕЛЬСКОГО ХОЗЯЙСТВА СССР. *Условия труда и системы заработной платы в лесном хозяйстве* (Пособие для рабочих, инженерно-технических работников, счетного персонала и работников лесной охраны лесхозов и лесничеств). Moscow, Издательство Министерства сельского хозяйства СССР, 1960. 347 pp. 6.50 roubles.

This book, edited by the Chief Inspectorate of Forestry, is essentially a practical manual on labour legislation concerning forestry workers in the Soviet Union. Chapters are devoted to such topics as laws and regulations with regard to admission to employment, hours of work, wages, safety measures, special allowances for forestry workers, labour discipline, labour conflicts, social insurance, pensions, etc.

HAYTHORNE, George V. *Labor in Canadian Agriculture*. Harvard Studies in Labor in Agriculture. Distributed for the Harvard Graduate School of Public Administration of Harvard University. Cambridge, Massachusetts Harvard University Press, 1960. 122 pp.

The integration of agricultural manpower in a developing economy, particularly the movement of labour out of agriculture and the conditions under which it occurs, continue to be a subject of much controversy. This is largely because of the lack of detailed knowledge of the many interacting forces inside as well as outside agriculture which govern the supply of and demand for agricultural labour, without which it is impossible to formulate policies to help adjust the agricultural labour market with a minimum of time, economic loss and social hardship.

The present study, based on the experience of Canada during the first half of this century, is an example of the way in which the required information may be obtained and interpreted.

The author first portrays the development of Canadian agriculture within the framework of an expanding economy. While there are important regional variations, limitation of space demands that the present review should be confined to the national picture. A particularly noticeable feature is the different rates of growth in agriculture and in other industries. At the beginning of this century agriculture was Canada's major industry and provided the principal means of livelihood. For every four agricultural workers in 1901 six worked in other occupations, whereas some fifty years later for every four workers in agriculture twenty-one worked elsewhere. In absolute figures the agricultural labour force continued to increase until 1939. During the first two decades this growth was a reflection of agricultural expansion in terms of cultivated area, but during the prolonged depression it was associated mainly with the lack of employment opportunities in other occupations. Since 1939 agriculture has experienced a sharp decline in manpower both in absolute and relative terms, by 1956 agricultural workers

representing only 14 per cent. of the total labour force. Despite this reduction in manpower agricultural production has steadily increased. Expansion in farm acreage in the western provinces, more intensive livestock production, the rapid extension of mechanisation and other technical improvements have all contributed to higher output and higher productivity, greatly stimulated by large export demands and an expanding domestic market and facilitated by the improvement of marketing.

In the second chapter a detailed analysis is made of the changed composition of the agricultural labour force. Throughout the period under review the largest part of agricultural manpower was provided by farm operators and unpaid family members. Wage earners were rather few at the turn of the century but their numbers increased substantially and exceeded the number of unpaid family members by 1911. During the next two census periods (1921, 1931) there was a slow increase in the wage-earning labour force, but a very rapid one of unpaid family workers. Both declined rapidly in the forties. The number of farm operators, in contrast, has been far less influenced by the transformation of agriculture and the total economy. After a sharp increase till 1911, they remained on a more or less stable level till 1941, since when there has been a gradual downward trend.

The agricultural labour force has also been influenced by changes in the seasonal pattern of labour requirements. Increasing diversification and greater mechanisation of farming have been two factors contributing to lower seasonal peak labour demands. On the other hand, higher production of such specialised crops as fruits, vegetables, sugar beet, etc., has led to relatively more, rather than less, summer work.

Many Canadian farmers work in other occupations during the slack seasons to add to their income, employment in logging being a case in point. The present trend towards year-round logging operations, encouraged by the greater use of mechanical equipment, has reduced this opportunity, but there have developed many other forms of combination of farming with other jobs. For some farmers this serves as a stepping stone to taking up alternative employment permanently, while for others it is a means of obtaining the necessary funds for expanding and improving their farming operations.

The third chapter examines in greater detail the various forces which have affected the use of agricultural labour. The author distinguishes between economic factors (income, wages), social factors (attitude towards farming) and a combination of both (working and living conditions).

The interaction of these forces on the farm labour market and its functioning are the subject of the fourth chapter. Major attention is focused on measures taken by public and private agencies to remove or to reduce certain imperfections in the farm labour market due to the relative isolation of agriculture, the limited knowledge of employment opportunities elsewhere, sudden changes in weather and crop conditions, social resistance to labour mobility, etc. These measures have aimed at bringing about a quicker and more complete adjustment of labour demand and supply than would normally be the case. In recent years a great deal of effort has been made to encourage and organise the movement of workers to labour deficit areas, particularly during the harvest season.

The final chapter discusses the allocation of manpower and other agricultural resources. It is stressed that the traditional ways in which these resources have shifted within agriculture and between agriculture and other industries have often led to slow, haphazard and incomplete results. This is particularly the case in subsistence farming areas, which have remained relatively untouched by economic and social progress, in contrast with other more prosperous farming regions. In the latter, improvements in the utilisation of resources and of incomes have been substantial and the gap is narrowing between the returns from the use of resources in agriculture and in other industries. These improvements have greatly helped to bring about better working and living conditions for wage earners, though they still lack many of the social benefits enjoyed by workers in other industries. The author considers that several factors stand in the way of any general or group action to improve the situation, including the great variations in the physical

conditions of agriculture and the fact that there is practically no organised expression of opinion by the workers themselves.

In the discussion of the essential conditions for achieving a high level of employment in Canadian agriculture, the author emphasises the need for continued over-all studies and analyses of the position of agriculture in the Canadian economy from the standpoint of both human and material resources. " These studies are basic to the formulation of industrial and government policies designed to promote full employment not only in agriculture but generally in the country. More progress, however, towards achieving fuller employment of all resources is likely to be made through concentrating studies in specific areas and in specific types of farming. "

In his conclusions concerning the general outlook of Canadian agriculture and its labour force the author considers that there appears to be every likelihood of a continuing strong demand for food to meet export and domestic requirements and thus of a reasonably steady upward trend in agricultural production and income. As greater attention continues to be given to improvements in the organisation and utilisation of physical and manpower resources through sound production and marketing programmes, and as other sectors of the economy expand, more people may be expected to move out of agriculture. On the other hand, a more businesslike approach to farm operations, the development of new speciality farming, the spread of modern types of equipment requiring specialised skills and improved working and living conditions on an increasing number of farms are likely to enhance the appeal of agriculture as an occupation. Agriculture would then be placed in a better position to compete successfully for skilled labour and more people from outside farming may be attracted to it. In the author's view this requires, above all, improved education and training facilities in rural areas on a broad occupation and career basis and the presentation of agriculture and its career opportunities for serious consideration to the youth in urban centres.

Козодоев, И. И. *Земельные отношения в социалистических странах* (Очерк теории). Moscow, Соцэкгиз, 1960. 352 pp. 8.55 roubles.

This book by I. I. Kozodoev is a study of land relations and economic rent in socialist countries. After analysing the reasons for land distribution to the peasants in Peoples' Democracies and nationalisation of land in the U.S.S.R. the author shows how problems related to the division of income from land between the State and the peasants became particularly important. The policy of the Communist Party and of district authorities in the state purchase of agricultural products is then examined, along with the relations between the machine tractor stations and the co-operative farms and the taxation policy of the Government. A final section deals with the bases of economic policy for agriculture, particularly the determination of prices, the disposal of surplus products and the distribution of surplus income.

Co-operation; Handicrafts.

Bundesministerium für Arbeit und Sozialordnung, Federal Republic of Germany. *Beschäftigtenstruktur im Handwerk.* Zweites Heft der Reihe. Betriebe und Beschäftigte des Handwerks in der Bundesrepublik Deutschland. Bonn, 1960. 49 pp.+22 appendices.

This is a comprehensive statistical study of manpower structure in handicrafts in the Federal Republic of Germany, prepared and issued by the Ministry of Labour and Social Affairs on the basis of the handicrafts census taken in 1956.

The first part is introductory. Part II presents principles and methods applied in the classification of the statistical data. It deals with the sphere of handicrafts and their division into groups and branches, paying close attention to the notion of a workshop as a statistical unit and to the criteria applied in the classification of workshops and persons employed in handicrafts.

Proper statistical analyses of manpower structure are the subject of the next two parts. Part III makes a general survey of manpower statistics in handicrafts, while Part IV, the greater part of the study, contains a more detailed analysis of these statistics, giving the number of persons employed in different groups and branches of handicrafts classified according to such criteria as the size of the workshop and the status of persons employed, e.g. proprietor, assistant family member, journeyman, apprentice.

Appendices contain five tables presenting detailed statistical data and a list of publications of the Federal Ministry of Labour and Social Affairs concerning the handicraft censuses carried out in Germany in 1939, 1949 and 1956.

LUZ, Fábio. *Teoria e prática das sociedades cooperativas.* 5.ª edición revisada y puesta al día. Rio de Janeiro, Irmãos Pongetti, 1961. 564 pp.

ODHE, Thorsten. *Scandinavian Co-operative Wholesale Society, 1918-1958. The History of Nordisk Andelsforsbund.* Scandinavian Team-work Through Forty Years in the Service of Consumers. Copenhagen, Nordisk Andelsforsbund, Det danske forlag, 1960. 159 pp.

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